HD9696 . A3 Canada in the world of electronics C22 1982

# Volker-Craig.

VC414H VC4152 Hazeltine VT52 Compatible Compatible \_h. III VC4404 VC415APL The CHAT For APL users VC3100 ANSI Compatible

# Data Terminals for today and the future.

Volker-Craig terminals have established a reputation around the world for value and reliability.

Each is the product of years of thorough research, technological innovation and careful study of user needs. Not only are Volker-Craig terminals ready to meet your most demanding requirements today—they are ready to meet your requirements, as they change, in the years ahead.

From the economical CHAT, to the smart ANSI-compatible VC3100, there's a Volker-Craig terminal to suit virtually every application. For example, where VT52 or Hazeltine emulation is required there's the VC4152 and the VC414H, and for APL users there's the VC415APL.

To find out more about our complete line of terminals and computer peripherals, call or write today.



volker-craig

A NABU COMPANY

# volker-craig Imited

# volker-craig no.

333 Metro Park Rochester, New York, USA 14623 77 (716) 475-1221

Distributors in: Argentina, Australa, Belgium, Canada, Denmark, England, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Korea, Mexico, The Netherlands, New Zealand, Norway, Philippines, Singapore, Spain, Sweden, Switzerland, Talwan, U.S.A.

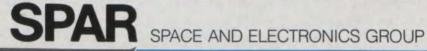
# volker-craig(uk)limited

William Olds Estate, Tolpits Lane, Watford Hertfordshire, England WD1 8XL Rickmansworth 10 09237-71378 Telex: 895-6082 Northern Office: 58 High Street, Prescot Merseyside L34 6HQ 10 051-430-7002



The remote manipulator arm successfully tested on the spaceship Columbia has shown Spar to be in the forefront of space technology. This same technology and experience is being applied daily to the design of satellites, their subsystems, shipborne surveillance systems for defence and high technology products for every day use in commerce and industry. Spar has achieved a worldwide reputation for excellence.

Spar Aerospace Limited, Space & Electronics Group, Suite 403, 6303 Airport Road, Mississauga, Ontario, Canada L4V 1R8 • (416) 678-9750 • Telex 069-68923 • TWX 610-491-1503



# Farinon

# The selection. The experience. The knowhow.

Most people know us for our low and medium capacity analog and digital microwave products. However, we also have a wide range of engineering, and technical support services.

Our sales engineers make sure you get the right equipment, price, and delivery. Product engineers provide assistance for your planning and technical requirements, while transmission engineers can design your complete microwave system, perform path surveys, testing and supply performance calculations.

A project management capability enables us to take care of all logistics from planning to system implementation including civil works. Many customers choose Farinon's highly-skilled EF&I team to install, turn-up, and test their microwave systems.

When it comes time to train your personnel our training program can be tailored to your needs. Should it be necessary, our repair and replacement service is just a call away.

Comprehensive documentation aids operating personnel in maintaining your system at optimum performance.

At Farinon, our blend of products and services backed-up by wide customer acceptance in Canada and abroad has made us today, the largest Canadian supplier of low and medium capacity microwave radios.



For more information please call or write to:

Harris Corporation, Farinon Division

Farinon Canada Ltd.: 657 Orly Avenue, Dorval, Quebec H9P 1G1 • Tel: (514)636-0974 • Telex: 05-821-1893 • Twx: 610-422-4122 9705-B Horton Road S.W., Suite 204, Calgary, Alberta T2V 2X5 • Tel: (403)259-2429 • Twx: 610-821-2754



# Canada in the world of electronics

"Canada in the World of Electronics" is published and printed in Canada by Maclean Hunter Limited, 481 University Avenue, Toronto, Ontario, Canada, M5W 1A7.

Leon James, Publisher, Special Projects. Ernie Welling, Editor, Canadian Electronics Engineering.

Alan Shaw, Art Director.
Designed and Produced by Creative
Communications, a division of Maclean
Hunter Limited.

Copyright © 1982 Maclean Hunter Limited. 6th Edition, July 1982.

Distributed by the Department of Industry, Trade & Commerce, Government of Canada.

# **Contents**

The Industry	5
Company Listings	<b>19</b>
Manufacturers	20
Consultants	71
Cross Index	<b>79</b>
Equipment	80
Components	89
Advertisers Index	91

For further information about Canada's electronics industry please contact Electrical and Electronics Branch, Department of Industry, Trade and Commerce, Ottawa, Canada K1A 0H5.

# YOU USE CUSTOM HYBR CROCIRCUITS, GARRETT NTS TO PRODUCE T

GARRETT MANUFACTURING, LTD.

Manager, Microcircuit Sales Garrett Manufacturing, Ltd.,

255 Attwell Drive, Rexdale Ontario, Canada M9W5B8

(416) 675-1411

PIZ

We want to produce your custom, thick or thin film hybrid
we want to produce in military aerospace navigation. We want to produce your custom, thick or thin film hybring the produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, thick or thin film hybring the want to produce your custom, the want to produce your custom to produce your custom the want to produce your custom the want to produce your custom the want to produce your custom to produce your custom the want to produce your custom to produce your cu Garrett is one of the world's top producers of custom military sonhistical carrett is one of the world's top producers of custom military highly sonhistical carregages hybrid microcircuits. We employ highly sonhistical carregages hybrid microcircuits. Garrett is one of the world's top producers of custom military |
aerospace hybrid microcircuits. We employ highly specs:
aerospace hybrid microcircuits the toughest quality specs:
B+ technology. And we meet the aerospace hybrid microcircuits. We employ highly sophis
B+ technology. And we meet the toughest quality specs. OBJECTIVE:

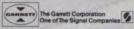
EXPERIENCE:

United States Military: Missiles: Chaparral REFERENCE: Shillelagh AMRAAM

Aircraft: F-15 Communications: Vinson

Other Applications: Ground Radar Satellites Tanks Torpedoes

**Garrett's Custom Microcircuits** 

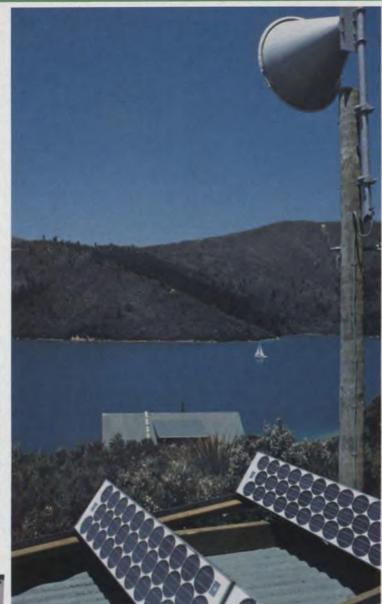












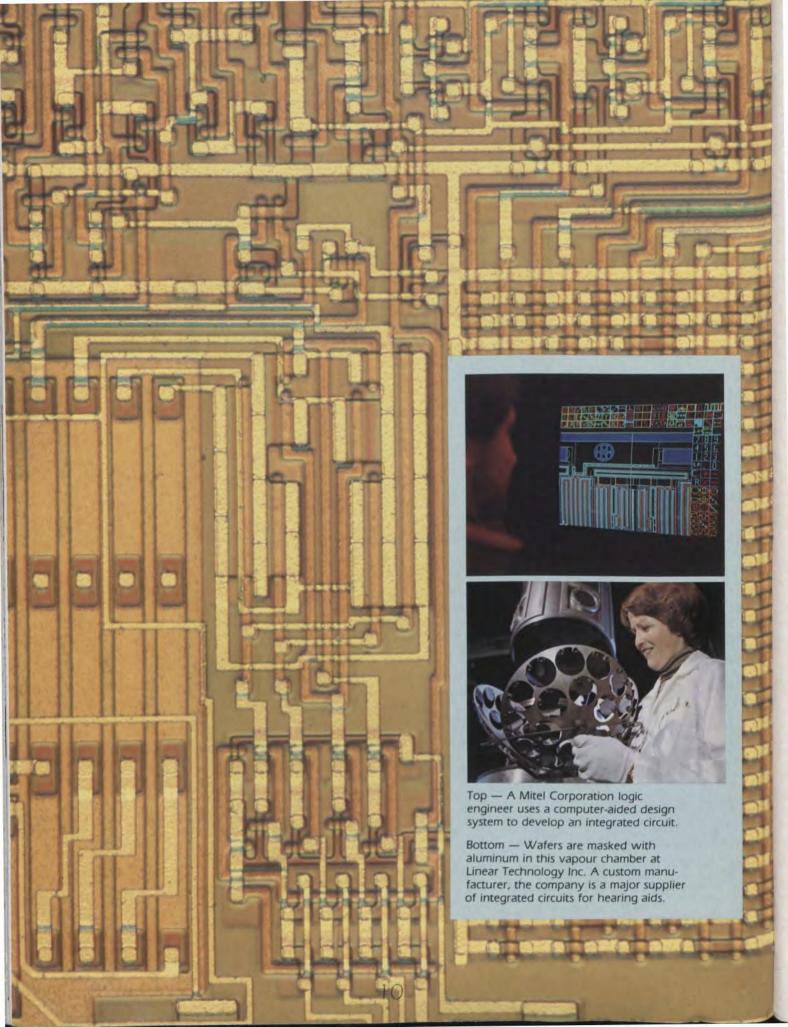
Canadian telecommunications skills are at work worldwide. Here a solar powered SR Subscriber radio system from SR Telecom Inc. connects scattered areas in a remote part of New Zealand's South Island.



Electronic controls for heavy-duty industrial drive motors (Lloyd Controls Ltd.)



With 1700 people directly involved in research, a third of whom have post-graduate degrees, Bell-Northern Research in Ottawa is Canada's largest privately owned R & D organization.



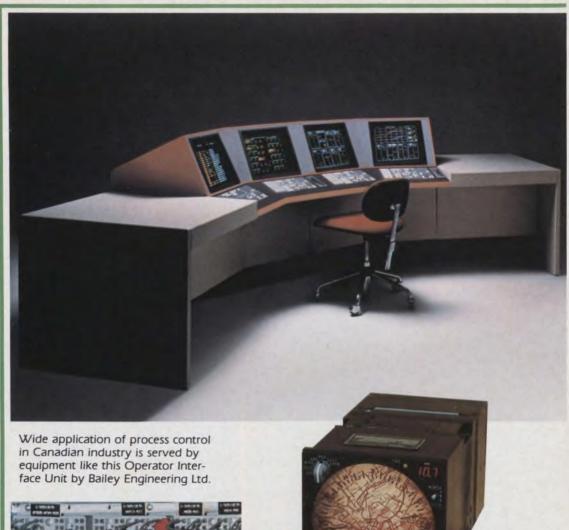


An innovative new technique uses lasers for printing on various materials. Lumonics LaserMark® portable marking system is for applications in product and package marking.



Aviation Electric manufactures this land navigation system for armoured vehicles.



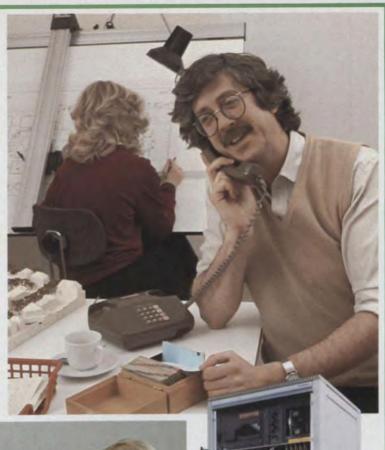




Continuity testing in live circuits can be made with this device from Securatest Manufacturing Ltd.



Top — A large number of Projected Map Systems, of which this display is a part, have been supplied by Computing Devices Company. Bottom — A central control system for a public utilities system designed and manufactured by Tracan Engineering Ltd.



Growing markets for telephone equipment are supplied by many Canadian manufacturers. This Siemens PABX (far right) handles 192 extensions and up to 42 trunks.



Office automation is receiving special attention by the Canadian electronics industry. A wide range of products, like this word processor from AES Data Ltd., are already available.

III





Northern Telecom's DMS-10, one of a family of digital switching systems now in wide use. Left - Making optical fiber at Northern Telecom's new plant in Saskatoon, Sask.



Telidon terminals under test at Viscount Industries Limited, a subsidiary of AEL Microtel.



Equipment for Canada's important Telidon technology is a growing part of the industry. Norpak's Information Provider System for making Telidon pages (right) is complemented by the company's graphics generating computer (left).



In the forefront of satellite communications technology, and a pioneer in communication satellites, Canada will launch five new communication satellites between 1982 and 1985. They will join the four Anik satellites that are now in geostationary orbit,

operating with over 100 earth stations.



Flat panel displays, made up of large numbers of micro-miniature light emitting diodes, have been developed by Litton Systems Canada Ltd.



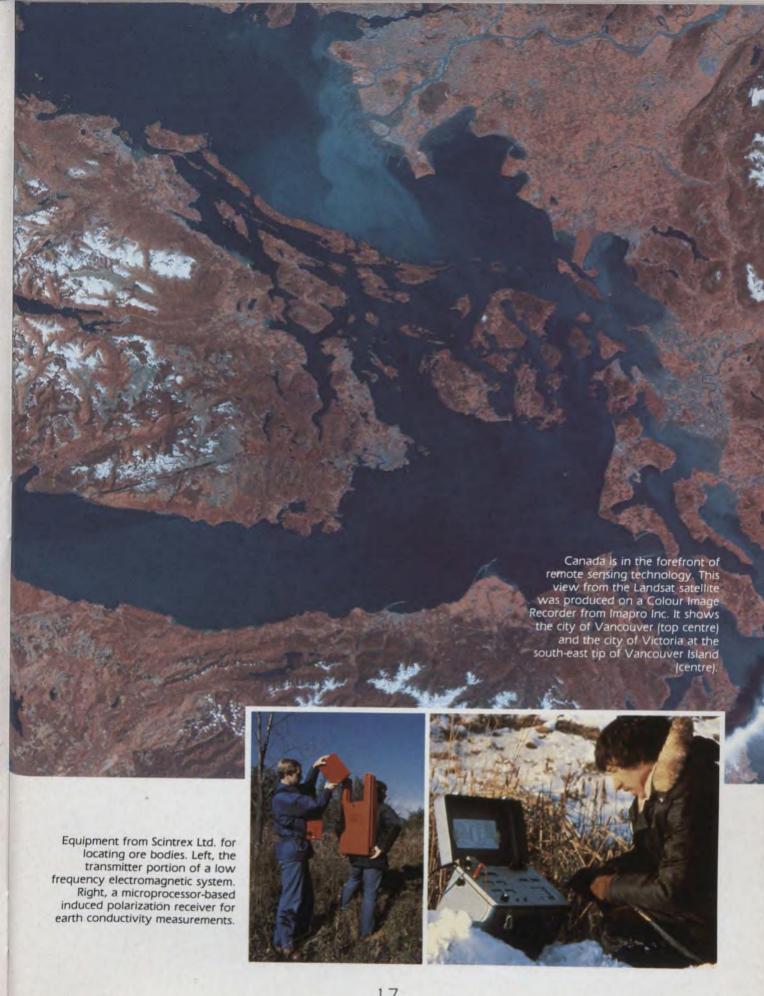
Video terminals for the data processing industry (Cybernex Limited).



This isolator by Positron Industries Inc. provides protection for communication wire lines entering power stations.



For exploration in remote areas Canadian Marconi Company makes this portable satellite navigation system which has positioning accuracy to within a few metres.



# **ADMIC CONTROLS**



# ADMIC CENTRAL CONTROL, MONITORING, SECURITY, & ENERGY MANAGEMENT

The ADMIC system is designed for energy management, alarm monitoring and access control in larger residential, educational, commercial, institutional and industrial buildings.

# DIRECT DIGITAL CONTROL ENERGY & SECURITY MANAGEMENT SYSTEM:

- Environmental Control
- Energy Conservation
- Equipment Monitoring
- Load Management
- Access Control
- Alarm Monitoring
- Building Energy Analysis
- Data Acquisition & Process Control
  - Lighting Control

# GUARANTEED ENERGY SAVINGS

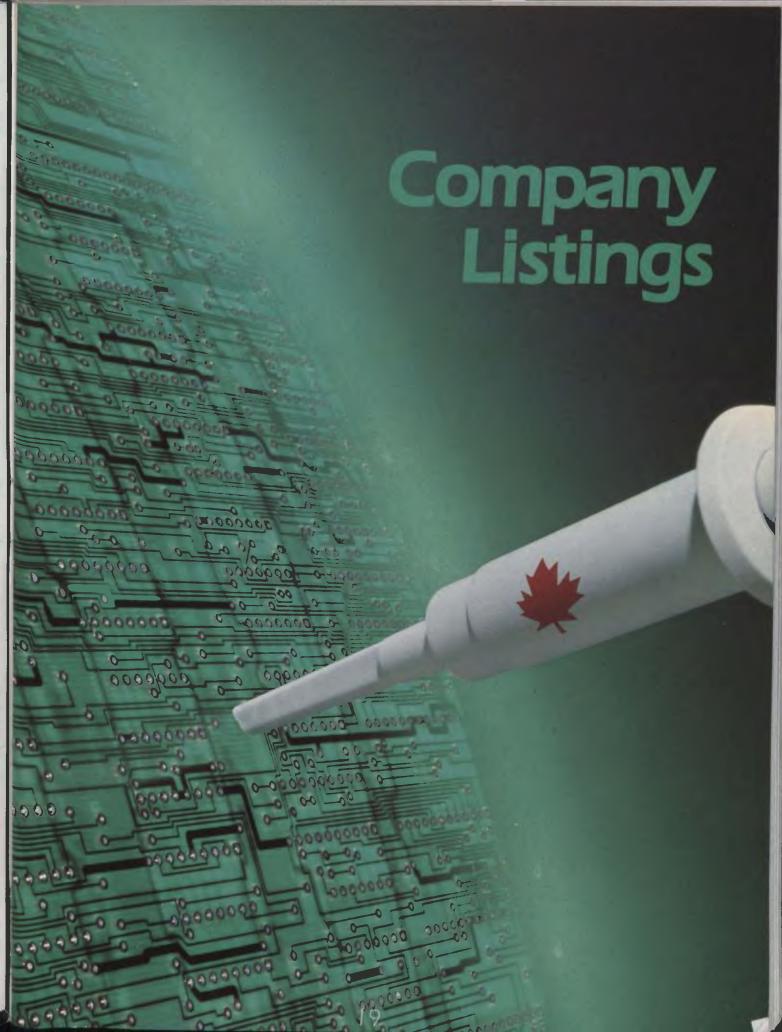
WITH THE ADMIC 580 — a compact multi-control center ready to take charge. Implementing the most energy efficient systems in an infinite number of locations. An investment in energy conservation that will reap major savings year after year.

For more information contact:

# ADAPTIVE MICROELECTRONICS LTD.

33 Glen Cameron Rd., Unit 2, Thornhill, Ontario, L3T 1N9 Telephone: (416) 881-4112 Cable Address: ADMICL Tor Telex 06 986766 Tor





# **MANUFACTURERS**

# A.E.I. TELECOMMUNICATIONS (CANADA) LTD.

419 Notre Dame Avenue Winnipeg, Manitoba, Canada R3B 1R3

Tel: (204) 942-7221 Telex: 07-57588 TWX: 610-641-9534 Cable: ASSOCELECT

WINNIPEG

Products: automatic number identification (ANI) equipment for use on step-by-step or crossbar telephone switching systems; emergency reporting system (ERS) for 911 or any other emergency

number.

# AEL MICROTEL LTD.

108 - 4664 Lougheed Highway Burnaby, British Columbia, Canada V5C 5T5

Tel: (604) 294-3274

Switching and Subscriber

**Products** — electronic (digital and analog) telephone switching equipment, private automatic branch exchanges (PABX's); key telephone equipment; secretarial answering units; telephones of all types; enterphone systems (building security control); engineering, furnish, installation and training services.

Transmission Products — microwave systems, engineering, furnishing and installation of complete communication systems including civil works, towers, power, etc.

**Business information System Products** — Telidon videotex terminals; combined color graphic Telidon and ASCII display terminals.

**Control Devices Division Products** — computerized energy-management and control systems for power utilities plus residential alarm systems for telephone companies.

# AES DATA LTEE/LTD.

100 Alexis-Nihon Boulevard, Ville St. Laurent, Quebec, Canada H4M 2P2

Tel: (514) 744-6711 Telex: 05-826602

Products: stand-alone word processing systems with editing video screen, electronic keyboard, single or dual diskette storage unit, microprocessor control unit, and automatic high-speed printer; optional communication

capability.

# ATC MANUFACTURING LTD.

P.O. Box 220 202 Regina Street North Waterloo, Ontario, Canada N2J 3Z9

Tel: (519) 885-4510

**Products:** laminated iron-core

transformers.

# **AANDERAA INSTRUMENTS** LTD.

560 Alpha Street Victoria, British Columbia, Canada V8Z 1B2

Tel: (604) 386-7783 Telex: 049-7390

Products: water-level recorder: oceanographic instrumentation.

Services: data translation services, calibration facilities for oceanographic instruments.

# **ABROYD CONSTRUCTION**

68 Shirley Avenue Kitchener, Ontario, Canada N2G 4A6

Tel: (416) 823-7411 (519) 744-2291 Telex: 069-55284

Products: communications equipment; antennas and accessores.

# ACME ENGINEERING PROD. LTD.

5706 Royalmount Avenue Montreal, Quebec, Canada H4P 1K5

Tel: (514) 342-5656 Telex: 055-60546

Products: carbon monoxide and carbon dioxide detection and control units and systems.

# Canada in the world of electronics

# ADAPTIVE MICROELECTRON-ICS LTD.

33 Glencameron Rd., Unit 2 Thornhill, Ontario, Canada L3T 1N9

Tel: (416) 881-4112 Telex: 06-986766 Tor

**Products:** Computerized security and energy-management controls system with full-color graphics display.

### AERO AQUA INC.

850 Magnetic Drive Downsview, Ontario, Canada M3J 2C4

Tel: (416) 661-5960 Telex: 065-24747

**Products:** meteorological instrumentation, including Minisonde system and self-contained remote weather station (MATER).

### AHEARN & SOPER LTD.

100 Woodbine Downs Boulevard Rexdale, Ontario, Canada M9W 5S6

Tel: (416) 675-3999 Telex: 06-965770

**Products:** interactive terminals,

word processors.

# AIRCRAFT APPLIANCES & EQUIPMENT LTD.

152 East Drive Bramalea, Ontario, Canada L6T 1E1

Tel: (416) 791-1666 Telex: 069-7540 TWX: 610-492-4396

**Products:** tachometer generators; voltage regulators, filters, strainers, coalescers, water separators for hydraulics, oil, fuel, gasoline etc.; auxiliary power units, gasoline-engine and dieselengine-driven generator sets to 60 kW.

# ALLEN-BRADLEY CANADA LTD.

135 Dundas Street Cambridge, Ontario, Canada N1R 5X1

Tel: (519) 623-1810 Telex: 069-59317

**Products:** relays, including electomechanical; starters, timers, contactors, pilot devices, switches.

# ALMA INDUSTRIES LTD.

61 Needham Street Lindsay, Ontario, Canada K9V 4Z7

Tel: (705) 324-5100

**Products:** piezoelectric ceramic element for sonobuoys; sonar and depth-sounding devices; piezoelectric ceramics for ultrasonic applications; ultrasonic generators; microwave filters; powders for piezoelectric ceramic fabrication; special application ceramics; high-purity and highdensity alumina ceramics.

# alphaNUCLEAR CO.

6380B Viscount Road Mississauga, Ontario, Canada L4V 1H3

Tel: (416) 676-1364 Telex: 06-983611

**Products:** instrumentation for the exploration, geophysics, mining and environmental monitoring industries, particularly relating to uranium and its decay products.

### AMBER ELECTRO DESIGN INC.

4810 Jean Talon West Montreal, Quebec, Canada H4P 2N5

Tel: (514) 735-4105

**Products:** test, laboratory and measuring equipment, including signal generators, spectrum analyzers, dB meters, distortion meters and plotters; frequency counters.

### AMERACE LTD.

10 Esna Park Drive Markham, Ontario, Canada L3R 1E1

Tel: (416) 475-6000 Telex: 06-986807

Cable: AMERACE MHKM-

**TORONTO** 

**Products:** timing devices — electropneumatic and solid state; airport lighting transformers and connectors; relays; terminal blocks; printed-circuit-board connectors.

# AMPEX CANADA INC.

132 East Drive Bramalea, Ontario, Canada L6T 3T9

Tel: (416) 791-3100 Telex: 06-97627 **Products:** video and pulse distribution amplifiers for television studio and CATV applications.

### AMPHENOL CANADA INC.

Amphenol North America Div. 44 Metropolitan Road Scarborough, Ontario, Canada M1R 2T9

Tel: (416) 291-4401 TWX: 610-492-4379 Telex: 065-25210

**Products:** filtered power connectors; printed-circuit connectors; power connectors; RF cable; CATV cables and connectors; RF connectors; rack and panel connectors; mobile whip antennas; tube sockets; telephone components; customized cable harnesses,

### AMPLITROL ELECTRONICS INC.

100 Montcalm Boulevard Candiac, Quebec, Canada J5R 3L8

Tel: (514) 659-9111 Telex: 05-27350

Cable: AMTREC, MONTREAL

**Products:** electronic high-security systems for financial institutions' vaults, safes, banks and residences.

# THE AMPROTEC CO.

P.O. Box 66 Pointe Claire-Dorval, Quebec, Canada H9R 4N5

Tel: (514) 636-4482

**Products:** solid-state switches and controls; custom devices and systems for special controls, timers, alarms etc.; solid-state replacements for electromechanical units, including high-speed telegraph relays and non-standard relay configurations; "no RFI" dimmers and speed controls.

# ANALYTIC SYSTEMS WARE LTD.

1501 East Pender Street Vancouver, British Columbia, Canada V5L 1V9

Tel: (604) 251-3234

**Products:** military and commercial power supplies; Loran navigation computers, digital autopilots, and electronic safety devices for marine use; batch and totalizing

# counters for printing and similar machines; telephone power room central alarm panels; DC motor controls.

ANATEK ELECTRONICS LTD.

240 Brooksbank Avenue North Vancouver. British Columbia, Canada V7J 2C1

Tel: (604) 980-7061 Telex: 043-52689

Products: power supplies; laboratory type, modular type, and for original equipment manufacturers; thick-film hybrids; transformers.

# ANDREW ANTENNA CO. LTD.

606 Beech Street Whitby, Ontario, Canada L1N 5\$2

Tel: (416) 668-3348 Telex: 069-81269

Cable: ANDCORP WHITBY

**Products:** microwave antennas for all commercial and military bands both standard and high performance; satellite earth station antennas for both synchronous and nonsynchronous satellites; coaxial Heliax (R) transmission line, air dielectric and foam dielectric; Heliax eliptical waveguide for frequencies from 1.7 GHz to 15.3 GHz; rigid coaxial transmission lines and waveguides; air pressurizing equipment and accessories; scatter propagation antennas; military antennas and transmission lines both tactical and strategic; custom-built radar antennas; navigational aid antennas; coaxial leaking feeder systems for underground communications or for buried detection systems.

Services: installation and field services relating to antenna systems.

# **ANRO ELECTRONIC INDUSTRIES LTD.**

300 Wildcat Road Downsview, Ontario, Canada M3J 2N5

Tel: (416) 661-2600 Telex: 065-24001

**Products:** solenoids; toroids; timers; miniature low-pressure switches; various custom electronic components.

# ANTECH ANTENNA **TECHNOLOGIES LTD.**

3608 St. Charles Blvd., Suite 23A Kirkland, Quebec, Canada H9H 3C3

**Products:** antenna feed systems for earth stations and satellites, custom design SAR antennas, custom designed feed systems for radio astronomy.

# APEX PARAMETRICS LTD.

P.O. Box 989 Stouffville, Ontario, Canada LOH 1LO

Tel: (416) 852-5875

Cable: APEXPARA TORONTO Products: ground electromagnetic survey systems, singlefrequency and multi-frequency.

# APPLETON ELECTRIC LTD.

750 Lawrence Street Cambridge, Ontario, Canada N3H 2N1

Tel: (519) 653-2581 Telex: 069-59396

**Products:** control systems for machine tools and general and hazardous industrial applications

# APPLIED MICROSYSTEMS LTD.

2035 Mills Road

Sidney, British Columbia, Canada V8L 3S1

Tel: (604) 656-0771 Telex: 049-7181

**Products:** oceanographic and geophysical instrumentation conductivity/temperature/depth measuring systems; tide gauges; current meter; salinity profiler; heat probe and accessories; printers and tape readers.

### APTEC ENGINEERING LTD.

4251 Steeles Avenue West Downsview, Ontario, Canada M3N 1V7

Tel: (416) 661-9722 Telex: 065-27210

Products: nuclear radiation detectors; geiger mueller counters; hyperpure germanium detectors, including portables; fixed gamma area monitors, liquid effluent monitors, microprocessor-based hand and foot personal contamination monitors; alpha-beta geiger counters.

# Canada in the world of electronics

**ARMOR ENCLOSURES** 

1105 Kingston Road Pickering, Ontario, Canada L1V 1B6

Tel: (416) 284-0131 Telex: 06981290

**Products:** sheet-metal cabinets designed in the modular concept for data processing, computer, telecommunications, for the electrical and electronic industry.

# ASCOLECTRIC LTD.

P.O. Box 160 Brantford, Ontario, Canada N3T 5M8

Tel: (519) 756-5287 Telex: 061-81149

**Products:** electronically controlled transfer switches; power-supply monitors; diesel-engine starting panels; synchronizing equipment.

# ATC MANUFACTURING LTD.

P.O. Box 220 202 Regina Street North Waterloo, Ontario, Canada N2J 3Z9

Tel: (519) 885-4510 Telex: 069-55249

**Products:** laminated iron core transformers.

# ATHABASCA RESEARCH CORP. LTD.

11210 - 143 Street Edmonton, Alberta, Canada T5M 1V5

Tel: (403) 453-6151 Telex: 037-2114

**Products:** weather radar systems, meteorological instruments.

**Services:** electronic research and development, air-quality monitoring.

# AUDIOTRONICS ENTERPRISES LTD.

631 Fort Street Victoria, British Columbia, Canada V8W 1G1

Tel: (604) 385-0911

Products: portable strobe

markers for buoys or construction warning displays; gas detectors for marine use, traffic controls; marine lights.

# AUDOR COMMUNICATIONS INC.

2700 Lancaster Road Ottawa, Ontario, Canada K1B 4T7

Tel: (613) 523-9933 Telex: 053 3172 AC1 Ott

**Products:** ground-based aviation communication systems; air navigation systems; six-digit 24-hr digital clock, consoles, mobile and fixed control towers, air traffic control multi-channel tape recorders, solid-state air traffic control communication control systems with intercom, hot lines, telephone.

### **AUTOMATEC**

A division of BG Checo International Ltd. 7700 De Lamartine Montreal, Quebec, Canada H1J 2A8

Tel: (514) 353-8940 Telex: 05-828723

Products and services: data acquisition and processing; supervisory control equipment (microprocessor based); annunciators; power-line carrier equipment (teleprotection); process control systems (microprocessor based); interface systems; emergency lighting; rolling-stock lighting (static inverter ballast); static power inverters and converters; fare-control systems; magnetic ticket readers; sequence-of-events recorders; flux control circuit for current transformers.

# AUTOMATIC WINDING CORP. LTD.

300 Wildcat Road Downsview, Ontario, Canada M3J 2N5

Tel: (416) 661-2600

**Products:** RF and IF transformers; radio oscillators; chokes; peaking coils; convergence coils; automotive components; various custom electronic components.

### **AUTO VOX INC.**

438 Avenue Papin St-Foy, Quebec, Canada G1P 3T9

**Products:** intercom systems; public address systems for business and industry.

**Services:** design and manufacture of some special electronics circuits for telephone companies.

# **AVIATION ELECTRIC LTD.**

P.O. Box 2140 200 Laurentien Boulevard St. Laurent, Quebec, Canada H4L 4X8

Tel: (514) 744-2811 Telex: 05-826688

Cable: AVIATION-MONTREAL

Products: land navigation systems; vehicle-position reporting systems; aircraft gasturbine fuel-control systems; aircraft instruments and flight-system components; repair and overhaul of aircraft instruments, accessories, and navigational aids; airborne radar electrical connectors.

# AVIONICS CO.

A subsidiary of Leigh Instruments Ltd.

P.O. Box 200 Niagara-on-the-Lake, Ontario, Canada LOS 1J0

Tel: (416) 468-3632

**Products:** printed circuit boards; terminal boards; silk screening and precious-metal plating; designs and assembles circuit boards to customer specifications.

# В

# BDK TEMPERATURE SYSTEMS LTD.

208 Toryork Drive Weston, Ontario, Canada M9L 1Y2 Tel: (416) 749-7300

**Products:** designers and manufacturers of controlled environment and laboratory test equipment for research, industry, education and medicine.

# **B&K PLASTIC INDUSTRIES LTD.**

9790 Meunier Street Montreal, Quebec, Canada H3L 2Y8

Tel: (514) 384-5560

**Products:** knobs, push buttons, slide controls, dials, escutcheons,

front panels, nameplates.

Services: facilities for shielding plastic components against electromagnetic interference and radio-frequency interference, by yacuum plating.

. .

**BACH-SIMPSON LTD.** P.O. Box 5484 1255 Brydges Street

# Canada in the world of electronics

London, Ontario, Canada N6A 4L6

Tel: (519) 452-3200 Telex: 064-5843 Cable: WIL8AC

**Products:** panel meters; control instruments; shunts and current transformers; portable electrical and electronic test equipment; medical diagnostic Doppler ultrasound meters, digital panel meters.

# **BAILEY CONTROLS**

860 Harrington Court 8urlington, Ontario, Canada L7N 3N4

Tel: (416) 639-8840 Telex: 061-8506 Cable: 8AILYCANDA

**Products:** pneumatic and electronic products for metering and control systems, digital sequencing systems, data acquisition systems and commissioning assistance for power and process industries.

### **BARADINE PRODUCTS LTD.**

8ox 86757, North Vancouver, 8ritish Columbia, Canada V7L 4L3

Tel: (604) 988-9853

**Products:** range of industrial computer cards to meet the STD 8US format.

# BARNES ENGINEERING CO. LTD.

380 Tapscott Road Scarborough, Ontario, Canada M18 2Y8

Tel: (416) 298-9853

**Products:** computerized machine controls, press controls, automation systems, malfunction-detection systems, anti-tiedown controls, automatic parts feeders and transfer systems, computerized controls for packaging machinery.

# BARON COMMUNICATIONS LTD.

P.O. 8ox 82010 6939 Hastings Street N. 8urnaby, 8ritish Columbia, Canada V5C 5P3

Tel: (604) 291-8272

**Products:** tone signalling encoders and decoders; singletone, two-tone sequential or

simultaneous, dual-tone multifrequency encoders and decoders; digital decoders; voltage regulators; radio telephone interconnect terminals, printed circuit boards.

# BARRINGER RESEARCH LTD.

304 Carlingview Drive Rexdale, Ontario, Canada M9W 5G2

Tel: (416) 675-3870 Telex: 06-968743 Cable: 8ARESEARCH

TORONTO

**Products:** geophysical instruments (magnetometers, EM); airborne and ground instruments and geochemical systems; program participation and management-consulting and contracting-laboratory analyses; ground and airborne pollution detection instruments and heavy water loss detectors; ground and airborne pollution monitoring, contract research and development, electro-optics, systems engineering, portable radiometer.

# BATTEN GRAPHICS LTD.

553 Richmond Street West Toronto, Ontario, Canada M5V 1Y6

Tel: (416) 863-1355

**Products:** lead frames, discs, filters, screens, masks and other photo-etched custom parts.

**Services:** chemical milling of a wide variety of metals, brass, copper, stainless steel, Alloy 42 Kovar Hy Mu 80 in thickness from .001 in. to .040 in.

# **BAYLY ENGINEERING LTD.**

A Member of the AEG-TELEFUNKEN group 167 Hunt Street Ajax, Ontario, Canada L1S 1P6

Tel: (416) 683-8200 Telex: 06-981293

Products: coaxial transmission systems; multiplex systems; openwire carrier systems; analog and digital, mono and stereo program channels (STLs); conference networks; telecommunications amplifiers, attenuators, termination sets, timers, flashers, vox units, and telephone ringing/ signalling equipment; electronic filters, equalizers, transformers, repeat coils, loading coils and

hybrids; remote control/supervisory and tone signalling systems and equipment; power line carrier and frequency shift tone equipment; RF coaxial load resistors; RF wattmeters; telephone jacks, plugs and adapters; VHF/FM broadcast transmitters; FM two-way mobile radio systems; secondary surveillance radar; direction-finding equipment; postal mechanization equipment for flat mail sorting; custom design and contract manufacturing.

# **BECKMAN INSTRUMENTS INC.**

Electronic Technologies Group 901 Oxford Street Toronto, Ontario, Canada M8X 5T2

Tel: (416) 251-5251 TWX: 610-492-1301

**Products:** precision multi-turn and single-turn potentiometers; trimming potentiometers; electromechanical assemblies to custom design.

### BEEL CONTROLS LTD.

2650 Pitfield Boulevard St. Laurent, Quebec, Canada H4S 1G9

Tel: (514) 334-6500 Telex: 05-824775 Cable: BEELCON

**Products:** DC thyristor adjustable-speed drives; rectifier power supplies; static AC power controllers for heaters, and induction motors.

## BIOSIG INC.

5471 Royalmount Avenue Montreal, Quebec, Canada H4P 1J3

Tel: (514) 733-3362

**Products:** medical electronics products — heart-rate monitors, telemetry systems, electromyographs.

**Services:** complete design, R&D, and manufacturing facilities to provide finished products on private-labeling and OEM basis.

# **BIOTECH ELECTRONICS LTD.**

715 Halpern Avenue Dorval, Quebec, Canada H9P 1G5

Tel: (514) 636-0790 Telex: 05-821501

**Products:** Bionaire range of air

cleaner/ionizers with the Electret filter; test instrumentation and R&D.

### BOMEM INC.

910 Place Dufour Ville de Vanier, Quebec, Canada G1M 3B1

Tel: (418) 683-1707 Telex: 051-3438

**Products:** interferometers and Fourier Transform spectromometers; sports-timing systems.

# BOSTON INSULATED WIRE & CABLE CO. LTD.

118 Shaw Street Hamilton, Ontario, Canada L8L 7V3

Tel: (416) 529-7151

**Products:** cable assemblies for TV cameras and computers; cables for microwave in satellite earth stations; elevator travelling cable; high-temperature radiation-resistant nuclear control cables.

# **BRISTOL AEROSPACE LTD.**

P.O. Box 874

Winnipeg, Manitoba, Canada R3C 2S4

Tel: (204) 775-8331 Telex: 03-5587 TWX: 610-671-3598 Cable: BRISAIRCO

Products: rocket telemetry and control systems (for scientific soundings and meteorological data acquisition) — VHF telemetry transmitters; voltage controlled subcarrier oscillators; voltage regulators; IRIG standard commutators; magnetometers; aspect measuring systems; vehicle telemetry antennas; electronic timers; modular data acquisition systems (pollution, meteorology, hydrology, oceanography, etc.); encoders and decoders; teletype formatters; remote and master control stations (manual and automatic); analog-to-digital and digital-to-analog converters; modems (RF or hard line); data processing; satellite telemetry equipment — PCM encoders and decoders; switching units; remote controlled nuclear heat exchanger tube inspection systems and instrumentation — eddy current instruments, data communications, microprocessor control systems, automatic tube selection devices, display consoles; wind

power conversion systems for remote locations — vertical axis turbines, low speed alternators, control systems, power systems.

### **BRISTOL OF CANADA**

234 Attwell Drive Rexdale, Ontario, Canada M9W 5B3 Tel: (416) 675-3820

Tel: (416) 675-3820 Telex: 06-989176

**Products:** industrial instrumentation for process control and data acquisition. Includes microprocessor-based distributed digital control systems for plant use, long-distance computer-based data acquisition systems, and conventional measurement and control instrumentation.

# **BRITISH ACOUSTICS**

1011 Meyerside Drive Mississauga, Ontario, Canada L5T 1K8

Tel: (416) 671-0982 **Products:** high-quality loudspeaker drive units and systems.

# BBC BROWN BOVERI CANADA INC.

2260 Place du Canada, Montreal, Quebec, Canada Tel: (514) 875-7140

Tel: (514) 875-7140 Telex: 058-21552

**Products:** overhead ground-wire power supplies; control equipment for power supplies in utilities and subways; telephone carrier systems.

# BRYSTON MANUFACTURING COMPANY

57A Westmore Drive Rexdale, Ontario, Canada (416) 746-1800

**Products:** af power amplifiers, preamplifiers, distribution amplifiers.

# **BURGESS SWITCH CO. LTD.**

777 Warden Avenue Scarborough, Ontario, Canada M1L 4C3 Tel: (416) 751-8280

Tel: (416) 751-8280 Telex: 06-963582

**Products:** switches, including illuminated, limit, micro, proximity, pushbutton, safety, snap-action, solid-state.

# Canada in the world of electronics

# **BURNDY INC.**

Components Division BO Bullock Drive Markham, Ontario, Canada L3P 3P7

Tel: (416) 294-6634 Telex: 06-22574

**Products:** electrical and electronic connectors and wiring accessories including PC connectors, IC sockets, rack and panel connectors, circular connectors; crimp terminals, cable ties and clamps, coaxial ferrules; installation tooling; bolted and compression power connectors for aluminum and copper conductors.

# **BURROUGHS INC.**

801 York Mills Road, Don Mills, Ontario, Canada M3B 1X8

Tel: (416) 445-4030 Telex: 07-57398

Products: Full-line computer

manufacturer.

# CAD/CAM GRAPHIC SYSTEMS LTD.

700 Industrial Avenue Ottawa, Ontario, Canada K1G 0Y9

Tel: (613) 526-0620

Products: printed circuit boards;

printed circuits.

Services: CAD of PCBs, ICs and

hybrids.

# CAE ELECTRONICS LTD.

P.O. Box 1800 St. Laurent, Quebec, Canada H4L 4X4

Tel: (514) 341-6780 Telex: 05-827812 TWX: 610-422-3063

**Products:** commercial aircraft flight simulators; military aircraft flight and tactical simulators; helicopter flight and tactical simulators; nuclear power station simulators; computerized airtraffic-control display systems; airborne magnetic anomaly detection and compensator systems for ASW applications; supervisory control and data-acquisition systems for electric power and petroleum industries; field maintenance, repair and overhaul, test and calibration services and facilities.

### C-TECH LTD.

525 Boundary Road Cornwall, Ontario, Canada K6H 6M7

Tel: (613) 933-7970

**Products:** omni-scanning sonars, digital depth sounders; interpolating transducer scanner; U.S. Navy design approved standard electronic modules (SEMs) underwater test facility; transducer and sonar systems engineering.

### CALIFONE INDUSTRIES LTD.

1305 Odlum Drive Vancouver, British Columbia, Canada V5L 3M1

Tel: (604) 254-5148 Telex: 04-54521

**Products:** tape recorders, listening centres and record players for educational institutions and industry.

# **CAMBRIDGE SPEAKERS LTD.**

260 Sheldon Drive Cambridge, Ontario, Canada N1T 1A8

Tel: (519) 623-0500

Products: loudspeaker drivers.

### CAMPTECH CIRCUITS INC.

3244 Kennedy Road Scarborough, Ontario, Canada M1N 3P7

Tel: (416) 298-9974

**Products:** printed circuit boards. **Services:** design, manufacture and assembly of printed circuit boards.

# CANADA SYSTEMS GROUP LTD.

Advanced Technology Systems Division

1736 Courtwood Crescent Ottawa, Ontario, Canada K2C 2B5

Tel: (613) 225-1171 Telex: 053-3661

**Products:** real-time computer systems and software for vehicle dispatch, telex exchange switching, supervisory control and material handling; computer graphics and air traffic control software and simulation; taxidispatch computer system with in-vehicle mobile terminal.

# CANADA WIRE AND CABLE CO. LTD.

257 Ferrand Drive

Don Mills, Ontario, Canada M3C 3J4

Tel: (416) 424-5000

**Products:** fibre optics products for telephone, CATV and control systems, and power cable capability.

# CANADIAN APPLIED TECHNOLOGY

Buttonville Airport, 16th Avenue Markham, Ontario, Canada L3P 3J9

Tel: (416) 477-6681 Telex: 06-986511

**Products:** telemetry system (digital minicomputer controlled); air-quality system; water-resource management system; data recorder; data averager; microprocessor industrial management systems for dredging operations.

# CANADIAN ASTRONAUTICS LTD.

1024 Morrison Drive Ottawa, Ontario, Canada K2H 8K7

Tel: (613) 820-8280

Products: custom designed electronic systems including: instrumentation systems; test facilities; display and control units; data acquisition systems; RF transmitters and receivers; antennas; battery chargers and management systems; signal processors; computer interfaces; microprocessor applications; satellite ground stations; airborne radar.

# CANADIAN DIGITAL EXPRESS CO.

5 Denison Street Markham, Ontario, Canada L3R 1B5

Tel: (416) 475-1855

**Products:** terminal options; process-control equipment.

**Services:** in-shop repair service for data-communication equipment, including terminals, modems and printers.

# CANADIAN GENERAL ELECTRIC CO. LTD.

940 Lansdowne Avenue, Toronto, Ontario, Canada M6H 3Z4

Tel: (416) 530-5000 Telex: 065-24238 **Products:** traffic-control equipment; controllers, signal and accessories.

# CANADIAN GENERAL ELECTRIC CO. LTD.

100 Wingold Avenue Toronto, Ontario, Canada M6B 1R2

Tel: (416) 789-3281 Telex: 06-524238

**Products:** mobile radio communications equipment, including mobiles, base stations, portables, pagers, paging terminals.

# CANADIAN LARSEN ELECTRONICS LTD.

Unit 101, 283 East 11th Avenue Vancouver, British Columbia, Canada V5T 2C4

Tel: (604) 872-8517 Telex: 04-54666

**Products:** two-way radio antennas.

# CANADIAN MARCONI CO.

2442 Trenton Avenue Montreal, Quebec, Canada H3P 1Y9

Tel: (514) 341-7630 Telex: 01-2260 TWX: 610-421-3564

Cable: ARCON MONTREAL

Products: full range of fixed, mobile and portable radio communications equipment in HF/SSB, VHF/FM and UHF/FM; marine radar and communications; tactical microwave radio relay: Doppler navigation systems for fixed and rotary wing aircraft; airborne and marine OMEGA navigation systems; aircraft instrument display systems; helicopter navigation radar: land-based and marine satellite navigation and position location systems; Telex exchanges, photogrammetric systems, surveillance radar, multilayer printed wiring boards: thin film, thick film and hybrid microcircuits; delay lines; filters; transformers.

# CANADIAN PUREGAS EQUIPMENT LTD.

Box 533 Hamilton, Ontario, Canada L8N 3K5 Tel: (416) 529-7047

Telex: 061-8377

**Products:** telecommunications equipment, including devices for monitoring pressurized cables and pressurized microwave antennas; ultrasonic cable-leak detectors.

# CANADIAN RESEARCH

30 Progress Avenue Scarborough, Ontario, Canada M1P 4W8

Tel: (416) 299-6666

Products: educational instruments; research apparatus; high-voltage test sets; panel and portable meters; school instruments; demonstration apparatus; geophysical instruments; public utility instrumentation; pollution instruments; pH meters and controllers; power supplies; electromedical instruments; television test apparatus.

# **CANADIAN RGL ELECTRONICS**

34 Continental Place Scarborough, Ontario, Canada M1R 2T4

Tel: (416) 292-2286 Telex: 06-525248

**Products:** modular multiplexing equipment and systems, particularly System 745 custom-fit data acquisition system for automatic tank-level gauging.

# CANADIAN STACKPOLE LTD.

550 Evans Avenue Toronto, Ontario, Canada M8W 2V6

Tel: (416) 255-2373 Telex: 06-967730

**Products:** isolated power systems; line isolation monitors; biomedical electrical testers; accessories for hospital electrical systems; prefabricated service walls for intensive or patient care; medical gas and electrical wall consoles.

### **CANSTAR COMMUNICATIONS**

Division of Canada Wire & Cable Co. Ltd.

1240 Ellesmere Road Scarborough, Ontario, Canada M1P 2X4

Tel: (416) 293-9722 Telex: 065-25403

**Products:** fibre-optic cable, fibre-optic couplers, optical line

# Canada in the world of electronics

terminating equipment, complete design, installation and servicing of fibre-optic systems.

# **CANTHERM**

8415 Mountain Sights Avenue Montreal, Quebec, Canada H4P 2B8

Tel: (514) 739-3274 Telex: 05-825619

**Products:** moxie — an NTC thermal sensor, thin film, high precision NTC thermistor.

### **CANWIRCO**

Belleville Division 200 Jamieson Bone Road Box 4700 Belleville, Ontario, Canada K8N 5E2

Tel: (613) 966-4130 TWX: 610 328 3240

**Products:** field telephone cable

for military use.

# CARDION/D.G.I. DIVISION

General Signal Ltd. 308 Legget Drive Kanata, Ontario, Canada K2K 1Y6

Tel: (613) 592-3141

**Products:** Digital data acquisition system, digital clock, VOR ground check system, helicopter air data system, ultrasonic velocity sensors; hydrographic navigation system, solid-state voice recorder.

### CENTAUR MFG. CO. LTD.

57 Newkirk Road Richmond Hill, Ontario, Canada L4C 3G4

Tel: (416) 884-6474

**Products:** ignition systems, ignition analyzers, including tachdwell analyzers.

# **CENTRAL DYNAMICS LTD.**

147 Hymus Boulevard Pointe Claire, Quebec, Canada

H9R 1G1

Tel: (514) 697-0811 Telex: 05-821506 TWX: 610-422-3906

**Products:** video terminal equipment for broadcast, educational and cable television systems, available in NTSC, PAL, PAL-M and SECAM standards; video production and distribution switchers, master control (presentation) switchers, machine

control systems and peripheral equipment; automated television presentation systems.

# CTF SYSTEMS INC.

15-1750 McLean Avenue Port Coquitlam, British Columbia, Canada V3C 1M9

Tel: (604) 941-8561 Telex: 04-353622

Products: High-sensitivity digital superconducting magnetometers for applications in biomagnetometry, rock magnetometry, geophysics and pure research; non-magnetic liquid helium dewars; ultrasonic tube corrosion analyzer for ship boilers; non-destructive testing equipment; data-acquisition systems for the above applications; signal-processing systems; research and development in electronics, cryogenics and applied physics.

# CTS OF CANADA LTD.

80 Thomas Street Streetsville, Ontario, Canada L5M 1Y9

Tel: (416) 826-1141 Telex: 06-97508

**Products:** static inverters; uninterruptible power supply systems including start-up assistance; DC-DC (static) converters; battery chargers; rectifier-power supplies; variable resistors; selector switches; trimming potentiometers; crystals; filters; rectifiers; inverters; microminiature components and circuit packages; custom wiring harnesses.

### CVDS INC.

160 Graveline Ville St-Laurent, Quebec, Canada H4T 1R7

Tel: (514) 342-9861

**Products:** microprocessor and CMOS digital telecommunications and telemetry control equipment, supervisory and remote control equipment; data-acquisition and telemetry systems; data line condition packages; autodialers and automatic calling units; telephone signal converter equipment; radio control heads; digital clocks and special assemblies.

# CABCO RESEARCH LTD.

P.O. Box 123, Lower Sackville, Nova Scotia, Canada B4C 2S8

Tel: (902) 865-0335

**Products:** computer and data communications, cable assemblies (RS232, GPIB, etc.); coaxial cable assemblies; bulk cable; switch boxes, panels, etc.; harnesses for any data or power cabinet or panels.

### CABLESHARE INC.

20 Enterprise Drive London, Ontario, Canada N6A 4L6

Tel: (519) 686-2900 Telex: 064-5693

Products: a series of X.25 computer communications interfaces, on-line business systems for large distributed companies, facilities management in computer centre and a series of Telidon-based presentation products. Telidon products: page creation, large screen Telidon-based Presentation Theatre, electronic advertising system for shopping malls and a touch screen information system.

### CALGARY CONTROLS LTD.

7056 H. Farrell Road Southeast Calgary, Alberta, Canada T2H 0T2

Tel: (403) 253-6101

**Products:** hand-held transceiver, can be used on data lines without interfering with data transmission; telecommunication products for selective calling; radio-telephone interface and alarm-status monitoring.

# CENTURY III ELECTRONICS INC.

1580 Rand Avenue Vancouver, British Columbia, Canada V6P 3G2

Tel: (604) 263-0911 Telex: 04-55490

**Products:** cable-television equipment 5-450 MHz consisting of Century III trunkline; distribution and apartment amplifiers; VHF/UHF multitaps; VHF splitters; couplers and related passive devices; AC power supplies coaxial connectors; terminators; adaptors; consulting services on cable television systems.

### **CETA LEARNING SYSTEMS**

452 Kraft Road Fort Erie, Ontario, Canada

Fort Erie, Ontario, Canada L2A 4M7

Tel: (416) 871-4260

**Products:** electrical and electronic training systems, breadboarding apparatus, power supplies, laboratory furniture, custom coil winding and manufacturing.

# CHION CORP.

P.O. Box 1600 Edmonton, Alberta, Canada T6E 5G8

Tel: (403) 432-0597

**Products:** compilers for translation of ALGOL 68 computer language.

# CHLORIDE SYSTEMS (CANADA) LTD.

4940 Bourg Street Montreal, Quebec, Canada H4T 1J2

Tel: (514) 735-2573 Telex: 05-826862

**Products:** DC power supplies for communications equipment, including power inverters.

### **CHUBB SECURITY SYSTEMS**

A Division of Chubb Industries Ltd.

80 Horner Avenue Toronto, Ontario, Canada M8Z 4X9

Tel: (416) 252-4141 Telex: 06-97570

**Products:** alarm control systems; proprietary computer-based management systems for security and fire; card-access systems.

# CIRCO-CRAFT COMPANY INC.

17600 Trans Canada Highway Kirkland, Quebec, Canada H9J 3A3

Tel: (514) 694-8000 Telex: 05-823523

**Products:** high-quality doublesided and multi-layer printed wiring boards for commercial and military applications.

### CIRCUIT DESIGN CORP.

1315 Mazurette St., Suite 1 Montreal, Quebec, Canada H4N 1G8

Tel: (514) 382-1440

**Products:** programmable printer, automatic process-control system, billiard computer, bowling com-

puter and automated weigh-scale system.

**Services:** micro-mini computersystem consulting; softwarefirmware custom services; electronic scales and balances distributing.

# CIRCUIT GRAPHICS LTD.

8030 Winston Street Burnaby, British Columbia, Canada V5A 2H5

Tel: (604) 420-3313

**Products:** printed circuits, plated-through holes and single-sided.

# COLLBEN MANUFACTURING CO.

5 Thorpe Street North Dundas, Ontario, Canada L9H 1K2

Tel: (416) 628-6913

**Products:** antennas — receiving, CB and mobile, VHF, FM and TV towers.

# COMAD COMMUNICATIONS LIMITED

91 Kelfield Street, Unit 5 Rexdale, Ontario, Canada M9W 5A3

Tel: (416) 245-1734 Telex: 06-989238

**Products:** video equalizing distribution amplifiers, video switching systems, audio jackfields, machine control systems.

# COM DEV LTD.

155 Sheldon Drive Cambridge, Ontario, Canada N1R 7H6

Tel: (519) 622-2300 TWX: 610-366-3164

Products: communications satellite components and subsystems: frequency bands from 100 to 40,000 MHz; filters, multiplexers, couplers, ferrite circulators and isolators, adaptors, terminations; high power microwave components and subsystems for earth terminals: diplexers, loads, combining networks, ferrite devices, couplers; microwave components and subsystems for terrestrial relay and radar systems from 1000 to 26,000 MHz.

# COMMERCIAL ELECTRONICS LTD.

1335 Burrard Street

# Canada in the world of electronics

Vancouver, British Columbia, Canada V6Z 1Z7

Tel: (604) 669-5525 Telex: 04-54470

**Products:** multi-media control systems for theatres, exhibition centres, planetariums, museums, etc.; synchronizers for multi-track audio recording and video production.

### COMMUTRON LTD.

1600 Brimley Road Scarborough, Ontario, Canada M1P 3H1

Tel: (416) 291-2733

**Products:** automatic telephonecall sequencer.

# **COMPAR CONNECTORS**

105 Brisbane Road Downsview, Ontario, Canada M3J 2K6

Tel: (416) 663-5670 TWX: 610-492-1337

**Products:** printed-circuit cardedge connectors; delta "D" (sub "D") connectors and accessories.

# COMPTEC INTERNATIONAL LTD.

7847 Venture Street Burnaby, British Columbia, Canada V5A 1V1

Tel: (604) 420-2830 Telex: 04-354548

**Products:** two-color molded keytops for computer peripherals, telephones, business machines; precision plastic components for electronic keyboards, plungers, housings, keytops (keycaps).

**Services:** precision mold-making, specializing in small parts normally found in the computer environment.

# COMPUTER ASSEMBLY SYSTEMS, LTD.

1245 California Avenue Brockville, Ontario, Canada K6V 5Y6

Tel: (613) 342-5041
Telex: 066-36574
Other Locations:
266 Marsland Drive
Waterloo, Ontario, Canada
N2J 3Z1
49 Jetland Road
Toronto, Ontario, Canada

M8Z 2G6

**Services:** printed circuit board assembly, using manual and automated facilities.

# COMPUTING DEVICES CO.

A Division of Control Data Canada Ltd. P.O. Box 8508 Ottawa, Ontario, Canada K1G 3M9

Tel: (613) 596-3810 Telex: 053-4139 TWX: 610-563-1632

**Products:** navigation including projected map systems and displays; signal processing associated with airborne systems and displays; acoustic processing associated with ocean systems; fire control associated with fixed and mobile fire-control systems; image processing and analysis; sensor data processing; artillery, tank and other specialized computers; special control displays; automated test equipment; guided radar surveillance system using Guidar guided radar sensor for lengthy outdoor perimeters; thrust computing systems associated with aircraft jet engines; field engineering and maintenance services.

# COMTERM INC.

545 Delmar Avenue Pointe Claire, Quebec, Canada H9R 4A7

Tel: (514) 694-3030 Telex: 05-821812

**Products:** computer terminals; video display products micro-processor based with most operational features implemented under software control; 5270 series features BSC and SNA/SDLC compatibility with the IBM 3270 family; 341-A/B bilingual Arabic/English terminals.

# **CONIAGAS RESEARCH INC.**

166 Pearl Street Toronto, Ontario, Canada M5H 1L3 Tel: (416) 597-0969

**Products:** "Coni-Mag" magnetometer.

### CONSPEC CONTROLS LTD.

44 Martin Ross Avenue Downsview, Ontario, Canada M3J 2K8

Tel: (416) 661-0500 Telex: 06-965843 **Products:** microcomputer-based monitoring and control systems for industries, utilities and mining, including a high-speed sequence-of-events logger with CRT display; monitoring and control system with distributed bus multiplexer; plant-wide energy-management systems for large users.

# CONSULTRONICS LTD.

38 Le Page Court Downsview, Ontario, Canada M3J 1Z9

Tel: (416) 630-0560 TWX: 610-492-7210

**Products:** audio analyzer, microwave monitor, power monitor, electrical transducers.

# CONTROL DATA CANADA LTD.

1855 Minnesota Court Mississauga, Ontario, Canada L5N 1K7

Tel: (416) 826-8640

**Products:** large-scale computer systems, defence systems, peripheral systems, computer supplies, data services and education and professional consulting services.

# CONTRONIC CONTROLS LTD.

7611 Bath Road Mississauga, Ontario, Canada L4T 3T1

Tel: (416) 678-1032 Telex: 06-983630

Products: electronic security and

fire alarm equipment.

# CORDS (CANADA) LTD.

220 Bowie Avenue Toronto, Ontario, Canada

M6E 2R8

Tel: (416) 787-1114 Telex: 06-969681

**Products:** plastic electrical and electronic hardware on stock and

custom basis.

### **CRAMCO SOLDER ALLOYS**

80 Sinnott Road Scarborough, Ontario, Canada M1L 4M7

Tel: (416) 757-2876

**Products:** perfect, tiny spheres of solder; high-purity solders; fluxes; printed circuit solders; rosin core.

### CRESCENT CONTROLS LTD.

2960 West 4th Avenue Vancouver, British Columbia, Canada

V6K 1R4

Tel: (604) 732-7461 Telex: 04-508538

**Products:** industrial process control equipment and systems; multi-point supervisory and alarm systems; computer-based supervisory control; supervisory control equipment and systems including pulse width modulation, audio tone signalling, time multiplexed signalling and computer-based time multiplexed signalling.

# CRITERION INSTRUMENTS LTD.

30 Progress Avenue Scarborough, Ontario, Canada

M1P 4W8

Tel: (416) 299-6666

**Products:** high-voltage test sets; panel and portable meters; school demonstration apparatus; public utility instrumentation; power supplies; insulation-resistance testers; isolation systems.

### CRONE GEOPHYSICS LTD.

3607 Wolfedale Road Mississauga, Ontario, Canada L5C 1V8

Tel: (416) 270-0096 Telex: 06-961260

Cable: CRONGEO TORONTO

Products: geophysical equipment; ground and borehole pulse electro-magnetic units, RADEM VLF-EM receiver; CEM-EM transmitter receiver; VEM-vertical loop EM; Newmont-type induced polarization receiver and

transmitters.

# **CROVEN CRYSTALS**

500 Beech Street Whitby, Ontario, Canada L1N 5S5

Tel: (416) 668-3325 TWX: 610-384-2750

**Products:** quartz crystals

### CRYSTECH CO. LTD.

140 Milner Avenue Scarborough, Ontario, Canada M1S 4L3

Tel: (416) 299-1282

Products: crystal oscillators and

# **CULVER DYNAMICS LTD.**

P.O. Box 4054, Station A Victoria, British Columbia, Canada

V8X 3X4

Tel: (604) 382-4423

**Products:** power monitor for telephone companies — monitors power usage and inputs information into existing data systems; digital panel meters for telephone power boards.

### CYBERNEX LIMITED

2457 Dunwin Drive Mississauga, Ontario, Canada L5L 1T1

Tel: (416) 828-2810 Telex: 065-22093

**Products:** designs and manufactures a broad range of synchronous and asynchronous video terminals as well as a dedicated application OEM microcomputer; design and support for all products are done in Canada.

# D

# DALE ELECTRONICS CANADA LTD.

18 Howden Street Scarborough, Ontario, Canada M1R 3E6

Tel: (416) 759-5631 Telex: 06-963694 Cable: DALOHM

**Products:** resistors — precision wire-wound, industrial wire-wound (fixed and adjustable with silicone coatings); trimmer and precision potentiometers; connectors; wire-wound packaged networks.

# DANIELS ELECTRONICS LTD.

225 St. Lawrence Street Victoria, British Columbia, Canada V8V 1Y2

Tel: (604) 382-8268

**Products:** marine and land SSB radiotelephone equipment and accessories.

### DATA IMAGES INC.

1283 Algoma Road Ottawa, Ontario, Canada K1B 3W7

Tel: (613) 744-3773 Telex: 053-4885

Products: high-quality standard



# #1in PCB design

Quality Control of PC boards begins with the artwork. To this end, Digital Graphics provides service bureau customers with a unique benefit, "the most comprehensive design facilities in North America". The result is reliable computer artwork using both manual and automatic design techniques.

# DG can:

- reduce costs and increase production yields.
- convert inaccurate hand-taped artwork into precision photoplotted artwork.
- provide automatic circuit verification including power and loading analysis reports.
- expand your capabilities without capital investment.
- design to the latest revision of MIL-STD-275.
- interpret and generate IPC code.
- provide drill film and drill tapes in a variety of formats.
- provide silk screen and solder mask artwork.
- provide assembly and detail documentation.

Call our head office for an estimate. For a final quotation, please supply your schematic, parts lists and mechanical board outline drawing.

**Digital Graphics** 

90 Don Park Road, Markham, Ont. L3R1C4 Tel (416) 475-9633

liquid crystal display (LCD) units, including numeric, alpha-numeric and dot matrix.

**Services:** design, development and manufacturing of high-performance custom LCDs.

# DATAGRAM INC.

1451 Graham Bell Boucherville, Quebec, Canada H4B 6A1

Tel: (514) 655-3200 Telex: 05-268521

**Products:** manufactures a line of communication processors: a statistical multiplexer and a Burroughs concentrator.

# DEES COMMUNICATIONS ENGINEERING LTD.

6475C - 64th Street Delta, British Columbia, Canada V4K 4E2

Tel: (604) 946-8433 (604) 946-6526

Products: telephone equipment — at customer location — manual intercom, interrupters, line relays, programmable exclusion units, lamp extenders, power supply for small key systems, ring and answer detectors, universal paging adapters, music on hold modules for 1A1, 1A2, 10A1, 10A2 systems, off-premise remote key set control, programmable and non-programmable electronic tone ringers.

# DELTA-BENCO-CASCADE LTD.

124 Belfield Road Rexdale, Ontario, Canada M9W 1G1

Tel: (416) 241-2651 Telex: 06-965552

Products: community antenna TV (CATV) distribution equipment: products for the complete system; modulators, trunk amplifiers and line extenders, directional taps; local and remote control addressable taps; TV transmitters and translators: complete range of low-power TV transmitter and translator devices for NTSC applications.

### **DELTRONICS LTD.**

Bloomington Road R.R. 4 Stouffville, Ontario, Canada LOH 1LO Tel: (416) 640-1216 Products: control units for wind generators; portable radio-controlled traffic lights on construction sites to replace flagmen; special electronics equipment.

### DEVELCON ELECTRONICS LTD.

856 - 51 Street East Saskatoon, Saskatchewan, Canada S7K 5C7

Tel: (306) 664-3777 Telex: 610 731 1324

Products: electronic datacommunications equipment, particularly in the limited-distance transmission and data-switching fields from initial design and manufacture through final sales and service; DATASWITCH 9000 series offers flexibility and control over the communications network; DATA SET 500 series provides economic short-distance transmission capabilities.

### **DEVTEK CORPORATION**

280 Rayette Road Concord, Ontario, Canada L4K 1B1

Tel: (416) 669-4484 Telex: 06-96408

Products: design and manufacture of aluminum dip-brazed heat exchangers and electronic chassis and cabinets; precision machining of castings and aerospace materials including pure beryllium components for accelerometer and inertial navigation systems.

# DIAL-A-TRONICS INCORP.

4810 Jean Talon West, Suite 3108 Montreal, Quebec, Canada **H4P 2M7** Tel: (514) 342-1533

Products: telephone-answering equipment.

# DICON SYSTEMS LTD.

719 Clayson Road Toronto, Ontario, Canada M9M 2H4

Tel: (416) 745-6044

Products: residential smoke detectors; intrusion alarms.

# THE DICTOGRAPH CORP.

89 Glen Cameron Road Thornhill, Ontario, Canada **L3T 1N8** 

Tel: (416) 881-6701 Telex: 06-964681



# Multi-layer Prototypes

Digital Graphics Artwork is the perfect link between PC Board design and prototype manufacturing.

Each Computer output is engineered with the manufacturing process in mind. The result, the best quality board in the shortest possible time.

# DG can:

- Manufacture to MIL-P-55110
- Provide double sided PTH in glass and polyimide in 1 to 10 days.
- Provide multi-layers in glass and polyimide in 3 weeks.
- Provide multi-layers in rigid-flex
- Provide silk screen solder mask
- Provide UV solder mask
- Provide Dry Film solder mask
- Provide solder mask over bare copper
- Provide nomeclature screening

Be sure to request a prototype board quotation along with your design layout requirements.

**Digital Graphics** 



90 Don Park Road, Markham, Ont. L3R 1C4 Tel. (416) 475-9633

# Canada in the world of electronics

**Products:** intercoms; autodialers; internal phone systems; telecommunications systems.

# DIFFRACTO LTD.

6360 Hawthorne Drive Windsor, Ontario, Canada N8T 1J9

Tel: (519) 945-6373

Products: laser and electrooptical non-contacting systems for gauging and inspection of components and parts.

### DIGHEM LTD.

First Canadian Place Suite 7000 P.O. 170 Toronto, Ontario, Canada M5X 1G9

Tel: (416) 862-7568

Products: airborne electromagnetic systems.

# DIGITAL EQUIPMENT OF CANADA

100 Herzberg Road P.O. Box 13000 Kanata, Ontario, Canada K2K 2A6

Tel: (613) 592-5111 TWX: 610-562-8732

**Products:** minicomputers and microcomputers; computer systems for process-control and industrial applications. Custom products and modules.

### DIGITAL GRAPHICS LTD.

90 Don Park Road Markham, Ontario, Canada L3R 1C4

Tel: (416) 475-9633 Telex: 06-986843

**Products:** a computer graphic service bureau specializing in the design and manufacture of prototype boards; printed circuits, flex circuits, two-layer and multilayer printed circuit boards; UPC and EAN bar codes on film.

### **DIGITAL VIDEO SYSTEMS**

716 Gordon Baker Road, Willowdale, Ontario, Canada M2H 3B4

Tel: (416) 499-4826 Telex: 06-966686

Products: broadcast video equipment, including digital time base correctors, digital frame storage device, and digital synchronizers.

# **DIPIX SYSTEMS LTD.**

1785 Woodward Drive Ottawa, Ontario, Canada **K2C 0P9** 

Tel: (613) 224-5175

**Products:** image analysis systems.

# **DIRECT DIGITAL INDUSTRIES**

LTD.

34 Continental Place Scarborough, Ontario, Canada M1R 2T4

Tel: (416) 292-2286

**Products:** modular multiplexing

equipment.

# DONAGA ELECTRONICS LTD.

1058A Albion Road, Suite 209 Rexdale, Ontario, Canada M9V 1A7

Tel: (416) 741-8543 Telex: 06-963548

**Products:** ultrasonic thickness meters; power supplies; signal generators and frequency counters; custom-designed electronic systems including: microprocessor applications; industrial instrumentation and control; data-acquisition systems.

Services: product design and development; electronic engineering, design and drafting; product validation testing.

# **DUAL LITE PRODUCTS LTD.**

9345 Pascal Gagnon St. Leonard, Quebec, Canada H1P 1Z4

Tel: (514) 326-8000 Telex: 05-828561

Products: emergency lighting

systems; power poles.

# **DURACELL INC.**

2333 North Sheridan Way. Mississauga, Ontario, Canada L5K 1A7

Tel: (416) 823-4410 Telex: 06-982253

Products: primary throwaway batteries, military and commercial; special battery packs for military radios, PRC 25, 77, 66, 75.

### DY-4 SYSTEMS INC.

888 Lady Ellen Place, Ottawa, Ontario, Canada K1Z 5M1

Tel: (613) 728-3711

Products: VGT-100 family of graphics (VT-100 emulation, PLOT-10 graphics); STD Buss

Board family; Orion family of STD Buss based microcomputers with Floppy and Winchester Disc capability; RAM Disc replacement for Floppies; bright display scan converters.

### DYNALOGIC INFO-TECH CORP.

141 Bentley Avenue Ottawa, Ontario, Canada K2E 6T7

Tel: (613) 226-1383 Telex: 053-3358

Products: DynaLedger small business and client accounting systems, with DynaLegal system for law firms, run on latest Dynalogic Microcomputer System (DMS); DynaScrip word processing and DynaMail mailing list support also available for DMS; DynaStor floppy diskette subsystems; 8100 series are interfaced to any ASCII machine via RS232C to provide IBM media compatibility; 8200 series are plug-compatibles for DEC LSI-11 Q-Bus computers.

### **DYNATEL SYSTEMS**

8461 Peele Street, Unit 23 Concord, Ontario, Canada L4K 1B1

Tel: (416) 669-4914

**Products:** television controlroom equipment.

F

### **EDA INSTRUMENTS INC.**

1 Thorncliffe Park Drive Toronto, Ontario, Canada M4H 1G9

Tel: (416) 425-7800 Telex: 062-3222

Products: fluxgate magnetometers; radon detection systems for uranium prospecting; automatic radon gas monitoring systems; degassing systems; magnetic observatory systems; gamma ray spectrometers and scintillometers for uranium exploration; portable proton precession magnetometers; radon daughter monitors; uranium assayers; rotary fusion burners for analytical laboratories; thermal printers; magnetic cassette recorders; uranium ore analyser; declination and inclination magnetometers.

### EDAC INC.

20 Railside Road Don Mills, Ontario, Canada M3A 1A4

Tel: (416) 445-2292 TWX: 610-492-1398

**Products:** printed-circuit cardedge connectors; printed-circuit metal-to-metal connectors; rectangular rack and panel connectors; printed-circuit card guides; contacts (loose, reel); contact crimp tools; connector accessory tools.

### **EKEG ELECTRONICS CO. LTD.**

P.O. Box 46199, Station G Vancouver, British Columbia, Canada

V6R 4G5

Tel: (604) 685-7817

**Products:** telemetry transmitters and implantable transmitters; telemetry receivers; heart rate meters; neurophysiological ratemeters; temperature control units; EKG amplifiers; respiration monitors; data acquisition systems for biomedical and industrial applications; EMG and temperature biofeedback systems; industrial weighing systems for logging applications; remote and expanded keyboards for computers for use by the disabled; electronic aids for the disabled.

### **ENA DATASYSTEMS INC.**

268 Galaxy Blvd. Toronto, Ontario, Canada M9W 5R8

Tel: (416) 675-3304 Telex: 06-989249

**Products:** complete range of international standard X.25 statistical multiplexors. All units use EIA RS-232 parts and/or programs that allow units to function using Univac, Honeywell, Hewlett-Packard and other communication protocols.

### ESE LTD.

1780 Albion Road Rexdale, Ontario, Canada

M9V 1C1 Tel: (416) 749-2271

Telex: 06-989522 TWX: 610 492 6360

**Products:** high-speed modems; data communications products; telephone traffic management systems including hardware and

software; contact scanners for nuclear reactors; circuit-access and test system for voice and data circuits; T-ASP, a signal processor computer for sonar, seismic exploration, X-Ray tomography and radar or IR imaging applications.

### **EDDY CURRENT TECHNOLOGY**

Box 67 Site 15 SS 3 Fredericton, New Brunswick, Canada E3B 5W9

Tel: (506) 455-0514

**Products:** eddy current instrument for non-destructive testing of metal tubes.

### **EDWARDS INTERNATIONAL**

6465 Airport Road, Mississauga, Ontario, Canada L4V 1E4

Tel: (416) 678-6767 Telex: 069-68768

Products: heavy-duty alarm bells, chimes, horns, buzzers, duotronic horn/siren; light-duty alarm bells, chimes, buzzers and mini-horns; electric door openers; door switches and trips for security applications; commercial electric clocks; telephone and intercom buzzers; fire protection; automatic heat detectors, smoke detectors: alarm bells, horns, chimes. buzzers, duotronic horn/siren; single-zone fire alarm control equipment; multi-zone fire alarm control equipment; remote lamp annunciator; emergency supervised communication equipment for high-rise buildings; emergency visual audio control system, EVAC, for high-rise buildings; fire alarm control equipment to monitor remote buildings over telephone lines; security products; door trips, switches and window tape; central control system to monitor building security systems; pulsar system, to monitor multifunctions over one pair of telephone cables; master clock and program equipment; industrial annunciator; hospital nurses call system, both visual and audio-visual; hospital doctors in/out register system.

### EKOLITE LTD.

525 East Hastings Street Vancouver, British Columbia,

Canada V6A 1P9

Tel: (604) 254-4515 Cable: CANEKO

**Products:** graph echo-sounders, flashing depth indicators.

# ELECTRIC POWER EQUIPMENT LTD.

1285 Homer Street Vancouver, British Columbia, Canada V6B 2Z2

Tel: (604) 682-4221 Telex: 04-51171

**Products:** fire detection and alarm systems, smoke detectors, emergency lighting systems, uninterruptible power supply systems.

### **ELECTROHOME ELECTRONICS**

809 Wellington Street North Kitchener, Ontario, Canada N2G 4J6

Tel: (519) 744-7111 Telex: 069 55449

**Products:** open-frame monitors for applications ranging from computer terminals to electronic games; commercial monitors and related products for applications including process control, medical instrumentation, broadcast and personal computers; Telidon technology-based integrated terminals and satellite TVRO receiving systems.

### **ELECTRONIC CRAFTSMEN**

73 Schaefer Street Waterloo, Ontario, Canada N2L 4C4

Tel: (519) 884-2210

**Products:** electrical and electronic coils and transformers including 3-phase transformers.

# ELECTRONIC HARDWARE SPECIALTIES LTD.

175 Eileen Avenue Toronto, Ontario, Canada M6N 1W3

Tel: (416) 769-0585

**Products:** wire-wound resistors.

### **ELECTROVERT LTD.**

3285 Cavendish Montreal, Quebec, Canada H4B 2L9

Tel: (514) 488-2521

**Products:** automated wavesoldering equipment; PC board assembly; cable trays; terminal blocks; wire harnessing systems; lead cutting, cleaning, component tinning, solder coating, reflow soldering, conveyorized assembly, component forming and custom design equipment for the electronics, electrical, communications, aerospace and automotive industries.

# ELECTRO VOX INDUSTRIES INC.

2626 Bates Road Montreal, Quebec, Canada H3S 1B2

Tel: (514) 731-3771 Telex: 05-268741

**Products:** loud-speaker type intercoms; amplifiers; public address equipment; fire alarm equipment; firefighter communication equipment (for high-rise buildings); interconnect telephone equipment.

# ELINCA COMMUNICATIONS LTD.

275 Slater Street, Suite 1402 Ottawa, Ontario, Canada K1P 5H9

Tel: (613) 233-5671 Telex: 053-3308

Products: antennas; transmission lines; satellite communication systems; power supplies; TDM systems; FDM data systems; radar displays; microwave communication equipment; satellite earth stations; satellite sub-systems; tropo-scatter; antenna systems; terrestrial communications systems; supervisory and control systems; teletypewriters; data transmission equipment; teletype switching systems; radars; radio relay equipment; test equipment; digital processing systems; radio and TV broadcast systems; teletypewriter multiplex systems; private and public switching systems; mobile telephones, etc.

### **ELKAY ELECTRONICS LIMITED**

435 Finchdene Square Scarborough, Ontario, Canada M1X 1B7

Tel: (416) 293-8278

**Products:** AC-DC, DC-DC switching power supplies in the range of 50 - 400 watts, custom designs as well as standard product; linear power supplies to 100 watts; DC-DC converters.

**EMHART CANADA LIMITED** 

Mallory Components Division 1079 Parkinson Road Woodstock, Ontario, Canada N4S 7W8

Tel: (519) 539-4891 Telex: 064-74132

**Products:** aluminum electrolytic capacitors; electromechanical timing devices; inductuners.

ENERGY LOUDSPEAKER CORP.

161 Don Park Road Unionville, Ontario, Canada (416) 475-0050

Products: loudspeakers, drivers,

systems.

EPIC DATA SALES LTD.

7280 River Road Richmond, British Columbia, Canada V6X 1X5 Tel: (604) 273-9146

Telex: 04-355701

Products: a complete range of microcomputer-based data collection terminals and microcomputer-based system control units designed to provide simple, practical and flexible systems for such applications as: time and attendance; access control; inventory control; job costing; maintenance; materials control; weigh scales (up to 75 tons); control systems used in library circulation systems and suitable for special data-collection applications.

EPITEK ELECTRONICS LTD.

100 Schneider Road Kanata, Ontario, Canada K2K 1Y2

Tel: (613) 592-2240 Telex: 053-3544

**Products:** custom thin and thick film hybrid microcircuits; audio amplifiers; audio preamplifiers; active filters; single-in-line resistor networks; dual-in-line resistor networks; molded dip resistor networks.

ESMOND MANUFACTURING INC.

455 Milner Avenue, Unit 4, Scarborough, Ontario, Canada M1B 2K4

Tel: (416) 299-5090

**Products:** cable harness, custommade printed circuit boards.

### **EXECUTONE LIMITED**

331 Bartlett Avenue Toronto, Ontario, Canada M6H 3G8

Tel: (416) 531-9961

**Products:** telephone systems from 5 to 800 telephones; intercom; nurse call systems; public address systems.

**EXIDE ELECTRONICS** 

5200 Dixie Road, Unit 20 Mississauga, Ontario, Canada L4W 1E4 Tel: (416) 625-9627, 625-7061

Telex: 06-961272

Products: uninterruptible power systems (UPS) — for small, medium and large applications from kilowatts to megawatts — for critical and on-line computer and telecommunications installations, airports, defence installations, satellite ground stations etc.; emergency lighting equipment, interruptible and non-interruptible, from small units to 25kVa; static inverters.



ELINCA COMMUNICATIONS LIMITED groups into one integrated and coordinated whole the combined resources in engineering, manufacturing and project management of several leading Canadian companies in the telecommunications, electronics and civil engineering industries.

Through these resources ELINCA offers to the world telecommunica-

tion systems of the highest reliability, incorporating the most advanced electronic technology. The unique combination of skills, capabilities and experience offered by ELINCA allows it to undertake complete responsibility for the design and implementation of telecommunications networks for telephone, telegraph, teletype, radio and television transmission.

Elinca Communications Limited/Limitée, 275 Slater Street Ottawa, Ontario, Canada K1P 5H9 Tel: (613) 233-5671 Tlx: 053-3308

# EXTEL COMMUNICATIONS (CANADA) LTD.

113 Telson Road Markham, Ontario, Canada L3R 1E4

Tel: (416) 475-1693 **Products:** teleprinters.

indicators, numeric and alphanumeric display modules, complete turnkey display systems; third-party maintenance devices; telephone-network monitoring systems.

### F

# FAIRCHILD AND STAIRS MANUFACTURING LTD.

Box 667, R.R. No. 5 Gloucester, Ontario, Canada K1G 3N3

Tel: (613) 526-0820 Telex: 053-4146

**Products:** industrial computer systems and components for control, monitoring, data acquisition and similar functions; design facilities for electronic black boxes in control and electronics.

### **FARINON CANADA LTD.**

Farinon Division of Harris Corp. 657 Orly Avenue Dorval, Quebec, Canada H9P 1G1

Tel: (514) 636-0974 Telex: 05-821893 TWX: 610-422-4122

Products: digital microwave (DM-Series) 2 to 18 GHz, with capacities from 1.5 to 45 Mbit/s for use with North American or CEPT bit rates. Digital Multiplexers are optionally available. Radio/multiplex interfaces fully compatible with standard North American crossconnects can also be used with transmission mediums such as fibre-optics.

Point-to-point microwave radios from 335 MHz to 8-GHz, for 6 to 1320 telephony or equivalent data circuits or video.

Point-to-multipoint distributed microwave radio systems; 335 MHz to 2-GHz for 6 to 120 telephony or equivalent data circuits for a wide variety of rural/urban applications.

# FERRANTI-PACKARD ELECTRONICS LTD.

6030 Ambler Drive Mississauga, Ontario, Canada L4W 2P1

Tel: (416) 624-3020 Telex: 06-961437

**Products:** light-reflecting electromagnetic display systems and components, including status

### FERRITRONICS LTD.

222 Newkirk Road Richmond Hill, Ontario, Canada L4C 3G7

Tel: (416) 884-3180 800-268-3862 Telex: 069-66680

Cable: FERRIC TORONTO

**Products:** tone signalling modules; encoders and decoders for mobile radio; digital alarm status monitors; mobile data terminals; automatic identification and vehicle selective calling units.

### FILTRAN LTD.

229 Colonnade Road Nepean, Ontario, Canada K2E 7K3

Tel: (613) 226-1626 Telex: 053-4957

**Products:** filter networks designed and manufactured for the telecommunications industry; transformers and inductive components of all types, including power up to 1,000 VA, CSA approved.

### FINELINE CIRCUITS LTD.

170 Nantucket Boulevard Units 1, 2, 3, 4 & 5 Scarborough, Ontario, Canada M1P 2N9

Tel: (416) 752-4242 Telex: 065-25248

**Products:** printed circuit boards, from schematic to finished product.

# FIRE DEVICES MANUFACTURING LTD.

270 Ferrier St. Markham, Ontario, Canada L3R 2Z5

Tel: (416) 475-0213

**Products:** thermoflex dual action detector, rate of rise and fixed temperature.

# Canada in the world of electronics

# FISCHER & PORTER (CANADA) LTD.

134 Norfinch Drive North York, Ontario, Canada M3N 1X7

Tel: (416) 667-9800 Telex: 06-969669 Cable: FISHCAPORT

**Products:** electronic, pneumatic, and distributed process control instrumentation, control panels, flowmeters, digital systems and chlorination equipment.

# FISHER CONTROLS CO. OF CANADA LTD.

P.O. Box 578 Woodstock, Ontario, Canada N4S 7Z6

Tel: (519) 539-9892 Telex: 064-74117

**Products:** electronic control room, instrumentation and electronic field-mounted instrumentation, primarily for process-control industries.

### FORTIN ELECTRONICS CORP.

660 King Edward Street Winnipeg, Manitoba, Canada R3H 0P2

Tel: (204) 786-1431

**Products:** 8-bit and 16-bit microcomputers with extensive line of application software for both.

# FOUNDATION ELECTRONIC INSTRUMENTS INC.

1974 Courtwood Crescent Ottawa, Ontario, Canada K2C 2B5

Tel: (613) 226-4000

**Products:** fiber optic data systems, fiber optic video-audio transmission systems, fusion splicing for glass fibers, optical power meters.

**Services:** consulting and system design.

### FOXBORO CANADA INC.

707 Dollard Avenue, LaSalle, Quebec, Canada H8N 1S5

Tel: (514) 366-4210 Telex: 055-66302

**Products:** electronic controls and instrumentation, including control systems, converters, event recorders, gauges, indicators and meters; industrial computers and analytical products.

### L.H. FROST LIMITED

1130 - Eighth Line Oakville, Ontario, Canada L6H 2R4

Tel: (416) 844-6681

**Products:** transformers and chokes, in both laminated and ferrite forms, for the electrical and electronic industry; standard and custom designs.

### G

### **GANDALF DATA LIMITED**

9 Slack Road Ottawa, Ontario, Canada K2G 0B7

Tel: (613) 225-0565 Telex: 053-4728

**Products:** data-transmission equipment, including modems, for copper wire, fibre-optic and radio channels; intelligent statistical and packet switching multiplexers; PACX data contention switching systems; high-speed intelligent 9600 bps Super/ Modem II; and others.

# GARRETT MANUFACTURING LIMITED

255 Attwell Drive Rexdale, Ontario, Canada M9W 5B8

Tel: (416) 675-1411 Telex: 06-989142 TWX: 610-492-4352

**Products:** temperature-control systems for aircraft cabins, crew compartments; electronic bays; windshields; emergency locator beacons and personal locator beacons; flight-instrument test sets; custom thin and thick-film hybrid micro-circuits; sub-contract manufacture of electronic assemblies; peripheral-vision display.

### GEAC CANADA LTD.

350 Steelcase Road West Markham, Ontario, Canada L3R 1B3

Tel: (416) 475-0525 Telex: 06-22874

Products: medium to large online computer systems handling up to hundreds of terminals with mass storage billions of bytes; complete systems available for on-line banking, library circulation, pharmacy prescriptions, school board administration, order entry and inventory control; and word processing.

### **GELECO ELECTRONICS LTD.**

2 Thorncliffe Park Drive, Unit 28 Toronto, Ontario, Canada M4H 1H1

Tel: (416) 421-5631

Products: RF edgewound coils; RF tube coils; RF contactors; tower lighting chokes; lightning chokes; MMB heavy-duty switches; plug-in meter inserts; phase sampling loops; complete antenna tuning and phasing equipment; broadcast antenna and studio design; phase and current sampling transformers; Dan Gibson parabolic microphones, electronic and acoustic.

# GENERAL DATACOMM INDUSTRIES (CANADA) LTD.

Suite West 410 2255 Sheppard Avenue East Willowdale, Ontario, Canada M2J 4Y3

Tel: (416) 498-5100 Telex: 06-966619

**Products:** modems, multiplexers and network control systems.

# GENERAL INSTRUMENT OF CANADA LIMITED

R.F. Systems Division 65 Waverly Street Delhi, Ontario, Canada N4B 1E8

Tel: (519) 582-0710 Telex: 061-81174 Cable: DELMET

**Products:** self-supporting, bracketed and guyed towers.

### **GEN-TEC INC.**

2625 Dalton Street Quebec, Quebec, Canada G1P 3S9

Tel: (418) 651-8000 Telex: 051-31591

**Products:** peak load stabilizers; demand control systems; TEA CO<sub>2</sub> laser for educational, industrial and research use; joulemeters; HV probe.

### GEONICS LTD.

1745 Meyerside Drive Mississauga, Ontario, Canada L5T 1C5

Tel: (416) 676-9580 Telex: 06-968688 Cable: GEONICS

**Products:** geophysical instrumentation, including lightweight portable electromagnetic detec-

tors; vlf electromagnetic units; multi-frequency helicopter EM systems; airborne vlf electromagnetic exploration systems; high-power, deep-penetration transient EM system; resistivity profiling instrumentation; oneman dipole electro-magnetometer; general electronics.

### GEOPROBE LTD.

5-41 Horner Avenue, Toronto, Ontario, Canada M8Z 4X4

Tel: (416) 252-5775

Cable: GEOPRO-TORONTO

Telex: 06-967858

Products: maxi-probe EMR-16 multi-frequency electromagnetic geophysical survey systems for ground exploration related to minerals, coal, oil and gas, uranium, geothermal energy, geological mapping, ground-water; geological mapping; structural mapping; construction and foundation work; radioactive and chemical waste disposal.

### GEORGE KELK LTD.

48 Lesmill Road Don Mills, Ontario, Canada M3B 2T5

Tel: (416) 445-5850 Telex: 06-966670

Cable: KELLEX TORONTO

Products: steel mill hot slab and ingot dimension gauges and sensors for on-line process control, including necessary software; rolling mill tensiometers; AC line-voltage regulators; zwarts-type series of electronic wave/tide and water-level gauges; load cells for roll-force measurement in rolling mills; optical gauges for rolling mills.

### **GEOTECH LTD.**

210 Don Park Road, Unit 2 Markham, Ontario, Canada L3R 2V2

Tel: (416) 498-5845

**Products:** Electromagnetic survey systems for geophysical exploration in helicopters.

### **GLENAYRE ELECTRONICS LTD.**

1551 Columbia Street North Vancouver, British Columbia, Canada V7J 1A3

Tel: (604) 980-6041 Telex: 04-352520 **Products:** microprocessor-based IMTS/MTS/2805 radiotelephone control heads; microprocessor based IMTS/MTS/2805 terminals (1 to 12 channels); DTMF mobile radio control head; DC/DC converters for railroad, mobile radio, telecommunication and industrial applications. Highstability DTMF encoder, MTS and RCC selective signalling decoder; sub-audible encoders and decoders, automatic calling units for computer dial-up. Fully automatic integrated telephone system (ITS) for four-wire private line communications over a variety of links using plug-in modules to facilitate system additions and growth. Single and double-sided printed circuit boards with through-hole plating; custom control and instrumentation panels and consoles for power utilities, mines and industrial plants. Fixed-route vehicle location and identification equipment; computer-aided systems for railroads and open pit mines; rear-of-train air-pressure monitor.

# GOODWOOD DATA SYSTEMS LTD.

P.O. Box 210 150 Mill Street Carleton Place, Ontario, Canada K7C 3P4

Tel: (613) 257-3610 Telex: 053-3593

Products: GDS 300 controller — multi-terminal display controller; GDS 232 monitor — RS-232C, or CCITT equivalent, monitor; GDS 105 diesel engine monitor — diesel diagnostics monitor; air traffic control system; hydrological systems; computer-assisted learning systems; radar/ satellite correlated weather-forecasting system.

# GRAPHIC CONTROLS CANADA LIMITED

215 Herbert Street Gananoque, Ontario, Canada K7G 2Y7

Tel: (613) 382-2108 Telex: 066-3216

**Products:** disposable ECG electrodes, ECG patient monitor cables, recording charts, Fetal monitoring electrodes and file systems, electromedical and ultrasound conductive media, file

mount forms; industrial recording charts, non-impact printer papers for terminals, printer/plotters and minicomputers.

**GRAPHICO PRECISION** 

1100 Bellamy Road Scarborough, Ontario, Canada M1H 1H2

TWX: 610 492 4371 Tel: (416) 438-6076

Products: printed circuit boards.

**GUILDLINE INSTRUMENTS LTD.** 

Churchill Road

Smiths Falls, Ontario, Canada K7A 4S9

Tel: (613) 283-3000 Telex: 053-3028

**Products:** electrical and temperature measuring instruments; voltage and resistance standards; AC/DC transfer standard current and potential transformer test sets; oceanographic instrumentation for pressure, depth conductivity, salinity, pH and dissolved oxygen, laboratory salinometer.

### Н

# HALLCRAFT ELECTRONICS LTD.

1760 Sargent Avenue Winnipeg, Manitoba, Canada R3H 0C7

Tel: (204) 786-5846

**Products:** engineering, supply, installation and maintenance of sound, background music and communication systems; customer assembly facilities.

# HAMILTON ENGRAVING CO. LTD.

P.O. Box 181, Station B 24 Clark Avenue Hamilton, Ontario, Canada L8L 7V7

Tel: (416) 527-0718

**Products:** design of printed circuit boards; printed circuit boards; specialty plating — precious metals; machine engraving.

# HAMMOND MANUFACTURING CO. LTD.

394 Edinburgh Road North Guelph, Ontario, Canada N1H 1E5

Tel: (519) 822-2960 Telex: 069-56523 **Products:** transformers; chokes; saturable reactors; sheet metal cabinets, consoles, racks, chassis — in all ranges and sizes for the electronics and electrical industries.

# HARBOUR INDUSTRIES (CANADA) LTD.

460 Normandie Farnham, Quebec, Canada V2N 1W4 Tel: (514) 293-5304

**Products:** braided shielding; coaxial cable; hook-up wire with Teflon insulation; extra-high-temperature cables; special wire for nuclear-reactor cores; aerospace, avionics wire to mil specs: W-16878, W-22759, W-81381, C-27500.

### HARCO ELECTRONICS LTD.

770 Bradford St. Winnipeg, Manitoba, Canada R3H 0N3

Tel: (204) 786-6041 Telex: 07-57690

**Products:** broad range of pregelled disposable electrodes, and semi-disposable electrodes; patient cable sets of all types; dental instrument for diagnosing and monitoring periodontal disease (Periotron).

# HARRISON, WILLIAMS & ASSOCIATES LTD.

1600 Laperriere Avenue Ottawa, Ontario, Canada K1Z 8P5

Tel: (613) 725-0296

**Products:** 810 display memory – a low-cost logic analyzer that converts any general-purpose oscilloscope into the equivalent of an 8-channel digital-storage scope.

### HENOTEX INC.

1625 Chabanel West, Room 980, Montreal, Quebec, Canada H4N 2S7

Tel: (514) 382-6120

**Products:** hand-held metal detector "Lymps 76" for airport, prison and police security; circuit board mounting; custom-built equipment; SID metal detectors for searching parcels.

### HERMES ELECTRONICS LTD.

P.O. Box 1005 Dartmouth, Nova Scotia, Canada B2Y 4A1

Tel: (902) 466-7491 Telex: 019-21744

**Products:** hf antennas; ionospheric sounder equipment; oceanographic buoys and devices; sonobuoys.

### HITECH CANADA LIMITED

Fifth Floor, 1390 Prince of Wales Drive Ottawa, Ontario, Canada K2C 3N6 Tel: (613) 226-7800

Tel: (613) 226-7800 Telex: 053-3262

**Products:** optical character recognition (OCR) page readers; word counting and page-processing systems; automated message-handling system.

**Services:** development of computer systems and applications software for: real-time control systems; radar, Comm and EW simulations; command control systems; database management systems.

### HONEYWELL LTD.

155 Gordon Baker Road Willowdale, Ontario, Canada M2H 3N7

Tel: (416) 499-6111 Telex: 065-25170

**Products:** solid-state electric heat controllers, electric heat thermostats, switching relays, lighting control systems, hydronic valves, limit controls.

### HUNTEC ('70) LTD.

25 Howden Road, Unit 8 Scarborough, Ontario, Canada M1R 5A6

Tel: (416) 751-8055 Telex: 06-963640

Cable: HUNTOR TORONTO

**Products:** induced polarization instruments including microprocessor IP receivers, and low and high-power transmitters for mineral prospecting and resistivity applications; surface and deeptowed marine seismic profiling systems for seabed and subbottom engineering and exploration.

**Services:** marine seismic profiling services for seabed engineering studies and resource inventory.

### HYLOGIC INC.

70A Brunswick Boulevard Dollard-des-Ormeaux, Quebec,

# Canada in the world of

electronics

Canada H9B 2C5

Tel: (514) 683-9555

**Products:** single and double-sided printed circuit boards.

### 1

### IRD MECHANALYSIS LTD.

333 Barton Street East Stoney Creek, Ontario, Canada

L8E 2L1

Tel: (416) 662-7577 Telex: 061-8453

**Products:** vibration/noise/spike energy measuring instruments and analyzers; in-place dynamic balancing instruments; vibration/spike energy/temperature/speed/thrust monitors and data-acquisition systems; dynamic balancing machines including roll balancers from 1 lb. to 500,000 lb. rotor weight capacity.

**Services:** field consulting service for vibration analysis and balancing.

### I.S.B.

9365 Pascal Gagnon Saint Leonard, Quebec, Canada H1P 1Z4

Tel: (514) 327-5818 Telex: 05-562171

**Products:** safety equipment including infrared security barriers, electronic controls for presses.

### **ITT BARTON INSTRUMENTS**

3840 - 11A Street North East Calgary, Alberta, Canada T2E 6M6

Tel: (403) 276-B164 Telex: 038-21536

**Products:** process instrumentation, including electronic temperature transmitters, electrical pulse transmitters, recording controllers, indicating switches, indicating controllers, liquid-level systems, corrosion-monitoring systems.

### **ITT COMMUNICATIONS**

175 Dawson Road Guelph, Ontario, Canada N1H 1A1

Tel: (519) 821-2000 Telex: 02-956547

**Products:** telephone sub-sets, key telephone equipment; data telephones; central-office peripheral switching equipment;

postal mechanization — lettercoding desks, letter-sorting machines, mail-conveyor systems; document sorters; business communication systems (PABX).

# ITT CANNON ELECTRIC CANADA

Four Cannon Court Whitby, Ontario, Canada L1N 5V8

Tel: (416) 668-8881 Telex: 02-2250

**Products:** electrical/electronic multi-contact connectors for commercial, nuclear, subsea, solar, down-hole mining and drilling, geophysical/seismic, military and aircraft use.

### IMAPRO INC.

308 - 1750 Courtwood Crescent Ottawa, Ontario, Canada K2C 2B5

Tel: (613) 226-4080

Products: extremely high resolution color and black and white image recorders with 35mm, 70mm and 240mm film format sizes, CIR™ (color image recorder) technology; fibre optics communications and data acquisition system; low cost QCR™ (quick color recorders) products: QCR 240 with 8" by 10" Polaroid output, QCR 120 with 4" by 5" Polaroid output and QCR 35 with 35mm output.

# INDUSTRIAL MEASUREMENTS LTD.

3160 Steeles Avenue East Markham, Ontario, Canada L3R 4G9

Tel: (416) 474-1246

**Products:** Telesponder remote alarm system which monitors unattended plant machinery via the dial telephone network.

# INTERA ENVIRONMENTAL CONSULTANTS LTD.

400 - 7015 Macleod Trail Calgary, Alberta, Canada T2H 1X9

Tel: (403) 253-8895

Telex: 03-824537

**Products:** airborne sensors and data acquisition systems for the environmental and resource sciences, research, monitoring and surveillance; surface environmental sensors and data acquisition systems; data processing and

analysis; groundwater contamination and air-quality engineering and consulting services.

# INTERCONTINENTAL DATA CONTROL CORP. LTD. (INTERDACO)

2373 Stevenage Drive Ottawa, Ontario, Canada K1G 3W1

Tel: (613) 733-4440 Telex: 053-4274

**Products:** time division multiplex (TDM) systems; frequency division multiplex (FDM) systems; 24channel terminals to all CCITT recommendations; 18-channel terminals to North American standards; single-channel subscriber sets; speech plus duplex systems; data sets; limiteddistance modems; DC-DC converters; telegraph power supplies; hubbing systems; regenerative repeaters; telegraph sequential selectors; polar adapters; remote loop-back devices; special telegraph test sets; telex autodialers; patch and test racks; 2-4 wire adapters; 2-4 wire terminating sets; line conditioning equipment, EIA current converters etc.

# INTERIMCO TECHNOSYSTEMS INC.

130 Albert Street, Suite 1600 Ottawa, Ontario, Canada K1P 5G4

Tel: (613) 234-2491 Telex: 053-3833

**Products:** installation and field servicing related to overseas civil aviation and telecommunications projects.

# INTERNATIONAL SYSTCOMS LTD.

4900 Fisher Street Montreal, Quebec, Canada H4T 1J6

Tel: (514) 735-6441 TWX: 610-422-3065 Cable: SYSCOMS

**Products:** vhf and uhf radio telephone equipment including mobile, portable, fixed station and rural radio; X.25 data-communications processors; statistical multiplexers.

### INTERNAV LTD.

Point Edward Marine & Industrial Park

P.O. Box 1261

Sydney, Nova Scotia, Canada B1P 6K3

Tel: (902) 539-0660 Telex: 019-35126

**Products:** Loran C navigating receivers and related marine

equipment.

J

### J.L. ELECTRON LIMITED

135 St-Germain Ouest Rimouski, Quebec, Canada G5L 4B6

Tel: (418) 724-6800

**Products:** micro and mini computers, access-control systems; data-acquisition buoy; programmable samplers; language laboratories.

K

### **KB ELECTRONICS LIMITED**

150 Bluewater Road Bedford, Nova Scotia, Canada B4B 1G9

Tel: (902) 835-7268 Telex: 019-21779

**Products:** industrial/marine power supplies; converters; battery chargers; watch receivers; EPIRBS, aviation ELT's; communication consoles; custom consoles; entertaining/paging consoles; static inverters.

# KELCEE COMMUNICATIONS INC.

48 Galaxy Boulevard Rexdale, Ontario, Canada M9W 6C8

Tel: (416) 675-9222

**Products:** video teleconferencing; video switching equipment.

### KERR-GINGE CANADA LTEE.

103 Avenue Gun Pointe Claire, Quebec, Canada H9R 3X2

Tel: (514) 697-8002 Telex: 05-821609

**Products:** Marine fire alarm

systems.

### KONAR CORP.

123 Manville Road Scarborough, Ontario, Canada M1L 4J8

Tel: (416) 751-5980 Telex: 06-363542 TWX: 610 492 2728

Products: printed circuit boards.

LAB-VOLT LTD.

4555 Metropolitan East Montreal, Quebec, Canada

H1R 1Z4

Tel: (514) 376-2120 Telex: 05-25415

**Products:** power supplies; measuring devices; RLC loading units; electromechanical systems (motor/generator); control systems utilizing various components for the teaching of controls as they relate to electric power technology; mobile training laboratories; digital trainers; electronic teaching systems; computer technology.

### LANICO INDUSTRIES LTD.

P.O. Box 398 Don Mills, Ontario, Canada M3C 2S7

Tel: (416) 438-6465 Telex: 065-25461

**Products:** conductivity controls; conductivity meters; conductivity probes; liquid level controls; liquid level probes; detergent dispensing controls; meters and accessories for large dishing machines; substitution boxes for resistance, capacitance, inductance and zener-diode.

# LARCAN COMMUNICATIONS EQUIPMENT LTD.

396 Attwell Drive, Rexdale, Ontario, Canada M9W 5C3 Tel: (416) 675-7517

**Products:** VHF/UHF television and broadcast transmitters for all power levels. VHF slot antennas; VHF/UHF filters and combiners.

### LAZARE ELECTRONICS LTD.

15887 Gouin Boulevard West Ste. Genevieve, Quebec, Canada H9H 1C5

Tel: (514) 620-1230

**Products:** power transformers up to 10kVA; inductors; chokes; ferroresonant transformers, single phase and three phase, 50 Hz up.

### LAZER-TECH LTD.

235 Nugget Avenue Scarborough, Ontario, Canada M1S 3L3

Tel: (416) 291-7727 Telex: 065-25308

**Products:** printed circuit boards; custom silk screening.

# LEBLANC & ROYLE COMMUNICATIONS LTD.

P.O. Box 880 514 Chartwell Road Oakville, Ontario, Canada L6J 5C5

Tel: (416) 844-1242 Telex: 06-982226 TWX: 610-495-2676

**Products:** communications towers; antenna performance measurements; heavy microwave and television transmission towers, both guyed and self-supporting; complete installation, maintenance and inspection service.

### LEECRAFT INDUSTRIES LTD.

2050 Ellesmere Road Scarborough, Ontario, Canada M1H 3A9

Tel: (416) 439-6320 Telex: 065-25428

**Products:** light indicator assemblies; lamp sockets; telephone cables; jacks; jack panels; jack fields; coaxial plugs and sockets (750 hm); toroidal coils; miniature low pressure switches; digital cross-connect panels.

### **LEEDS & NORTHRUP CANADA**

A Division of General Signal Ltd. 41 Constellation Court Rexdale, Ontario, Canada M9W 1K4

Tel: (416) 675-7700

**Products:** industrial curve drawings; multipoint recorders; transmitters; controllers final drive devices; liquid analysis; gas analysis; particle size measuring calibration and test equipment; distributed control, digital indicators, thermocoupler RTD's, radiation pyrometers.

# LEIGH INSTRUMENTS LTD. Industrial Products Division

350 Weber Street North Waterloo, Ontario, Canada N2J 4E3

Tel: (519) BB4-4510 Telex: 069-55440

**Products:** postal products — automated postal systems (optical character recognition, video character recognition, automatic sortation, electronic optical

scanning devices, software packages and peripheral, inkjet printer, bar code reader devices); communications products — telex and computer I/O terminals; high-technology fabrication, electronic assembly.

# Engineering & Aerospace Division

P.O. Box 82

Carleton Place, Ontario, Canada

K7C 3P3

Tel:(613) 257-3883/(613) 238-4400

Telex: 053-4148

Products: avionics systems: airfoil delivery systems, crash position indicators, flight data recorders, contained crash recorders, deployable crash recorders. cockpit voice recorders; avionics flight instrumentation: altimeters, mechanical strain recorders, ice detectors; specialized navigation instruments: safety and marker beacons, satellite beacons, radio detection (VHF) equipment, display and control systems. vessel traffic management systems, air traffic control systems.

### Frequency Control Division/

C.R. Snelgrove Company 141 Bond Avenue Toronto, Ontario, Canada M3B 1M2

Tel: (416) 447-8531 Telex: 069-66626

**Products:** quartz crystals; temperature-controlled crystal ovens; filter ovens crystal filters; monolithic filters; packaged oscillators; frangible switches; frequency synthesizers; glass-to-metal hermetic seals; stand-offs; multi-terminal headers; crystal, transistor and diode bases and end seals; nuclear radiation resistant connectors.

# LEIGH NAVIGATION SYSTEMS LTD.

7 Bovis Drive Pointe Claire, Quebec, Canada H9R 4W3

Tel: (514) 695-8130 Telex: 05-821529

**Products:** air traffic control systems, including radar approach control, fixed and mobile control towers, air navigation aids such as TACAN.

### LEITCH VIDEO LTD.

10 Dyas Road

Don Mills, Ontario, Canada

M3B 1V5

Tel: (416) 445-9640 Telex: 06-986241

**Products:** television terminal equipment, master clock systems, audio-video scrambling/descrambling systems.

### LENBROOK INDUSTRIES LTD.

1145 Bellamy Road Scarborough, Ontario, Canada M1H 1H5

Tel: (416) 438-4610 Telex: 065-25485

**Products:** vhf/uhf am/fm commercial 2-way radios, low and high power portables, aviation ground control radios.

# LIGHTING CIRCUITS ELECTROHOME LTD.

P.O. Box 940, Victoria Street Niagara-on-the-Lake, Ontario, Canada LOS K1O

Tel: (416) 468-7663

**Products:** single-sided, print and etch, high-volume printed circuit boards.

# LINDSAY SPECIALTY PRODUCTS LTD.

50 Mary Street West Lindsay, Ontario, Canada K9V 4S7

Tel: (705) 324-2196 Telex: 0-6962-860

Products: VHF and UHF domestic and CATV antennas: CATV line splitters and couplers; CATV directional multi-taps; complete line of CATV passive devices including matching transformers; and splitters; a complete line of CATV trunk distribution and apartment amplifiers (oneand two-way); subscriber cordless, corded, and V to U converters, commercial heavyduty antennas, 2 GHz transmitters, receivers, antennas; TVRO 4-GHz antennas 8, 10, 12, 15-ft., LNAs, receivers: DBS antennas, low-power TV transmitters and antennas.

### LINEAR TECHNOLOGY INC.

3435 Landmark Road Burlington, Ontario, Canada L7M 1T4 Tel: (416) 335-2996 Telex: 061-8525 Cable: LINEARBUR

**Products:** linear monolithic integrated circuits for low-power and low-voltage applications and general-purpose op amps, electret microphone buffers; custom and semi-custom linear monolithic integrated circuits.

### LIONMOUNT & CO. LTD.

315 Albany Avenue Toronto, Ontario, Canada M5R 3E2

Tel: (416) 537-9874

Telex: 065-25481 ROVIX-TOR **Products:** decade capacitance, resistance and inductance boxes for use in industry, research and education.

### LISLE-METRIX LTD.

49 Sheffield Street Toronto, Ontario, Canada M6M 3E5

Tel: (416) 249-9151 Telex: 06-969682

**Products:** conductivity, pH and turbidity process-control instrumentation.

# LITTON SYSTEMS CANADA LTD.

25 Cityview Drive Rexdale, Ontario, Canada Tel: (416) 249-1231

Telex: 06-989406 TWX: 610-492-2110 Cable: LITTCAN

**Products:** airborne inertial navigation systems; airborne area navigation systems; special purpose airborne computer systems; tactical data systems; air traffic control and ground controlled interception training simulators and other special purpose training simulators; automatic, portable and factory test equipment; airborne search radar; self-contained flight-inspection systems; flat panel multifunction cockpit displays; command, control and communications systems; and integrated security systems.

### LLOYD CONTROLS LTD.

3046 Westwood Street Port Coquitlam, British Columbia, Canada V3C 3L7

Tel: (604) 464-8505 Telex: 04353563 **Products:** industrial process-control systems for speed, torque, position controls; counting, real-time minicomputer systems for processes; variable speed DC, AC synchronous motor controls; sawmill and veneer-mill V-S dries with or without digital speed or position controls; hydraulic positioners.

### **LUMITROL LTD.**

5 Walker Avenue Toronto, Ontario, Canada M4V 1G3

Tel: (416) 921-6060

**Products:** television studio lighting and dimming systems, grid and track-systems, studio drapes; design, installation and service; specializing in dimmers for theatres, TV studios and architectural lighting applications.

### LUMONICS INC.

105 Schneider Road Kanata, Ontario, Canada K2K 1Y3

Tel: (613) 592-1460 Telex: 053-4503

Products: high energy pulsed TEA CO<sub>2</sub> lasers for spectroscopy, materials research, propagation studies and plasmal fusion research; lasers operating with such gases as carbon monoxide, hydrogen fluoride, hydrogen bromide and deuterium fluoride; industrial lasers for use in production marking of a variety of non-metallic surfaces; excimer UV/VIs pulse lasers for research.

### LYNCH-TRANSCOM INC.

239 Belanger Street St. Jerome, Quebec, Canada J7Y 1K7

Tel: (514) 436-6225 Telex: 05-839531

Products: negative-impedancetype voice-frequency repeaters (telephone industry application toll and extended-area service, long subscriber-loop service, special services); loop signalling extenders (for extension of telephone central-office subscriber loop limits to 1,800 ohms); booster power modules (for extension of telephone central office subscriber loop limits to

3,000 ohms); bridge lifters; impedance compensators; fuse and alarm panels.

### M

# MA ELECTRONICS CANADA LTD.

3135 Universal Drive Mississauga, Ontario, Canada L4X 2E7

Tel: (416) 625-4605 TWX: 610-492-4317

**Products:** components for terrestial microwave communication systems — isolators, circulators, switches, solid-state control devices, couplers, filters; components for satellite earth stations — GaAs FET LNAs, antennas, high-power terminations, high-power combining networks, high-power diplexers, medium-power amplifiers, transmit/reject filters.

### MCM COMPUTERS LTD.

6815 Rexwood Rd. Unit 9 Mississauga, Ontario, Canada L4V 1R2

Tel: (416) 678-7854 Telex: 06-983623

**Products:** Microcomputers using the APL programming language, 1 to 30 million characters of storage. Virtual memory computers based on the "Distributed Processor" concept.

# MDI MOBILE DATA INTERNATIONAL INC.

210 - 10991 Shellbridge Way Richmond, British Columbia, Canada V6X 3C6

Tel: (604) 278-3556 Telex: 04-355865

Products: mobile data-communications systems for speed and accuracy of digital data transmission over VHF/UHF FM radio links; systems include rugged mobile data terminals with (video) CRT display and OWERTY keyboard and optional hard-copy printer, and associated communications equipment; application areas include fleet management and control for police, security, fire, mobile maintenance, courier dispatch, materials handling, etc.

### MPB TECHNOLOGIES INC.

21051 North Service Rd. P.O. Box 160 Ste. Anne de Bellevue, Quebec, Canada H9X 3L5

Tel: (514) 457-2035

**Products:** Electronic graphic systems for broadcast applications (including microprocessor-controlled character generators and encoders) and for business applications (graphics composition and computer file data accessing and formatting); communications terminals.

### M.S.C. ELECTRONICS LTD.

254 Wildcat Road Downsview, Ontario, Canada M3J 2N5

Tel: (416) 661-4180 Telex: 06-23494

**Products:** electronic equipment and systems and systems engineering; turnkey facilities for radio and television stations.

# MacDONALD, DETTWILER & ASSOCIATES LTD.

3751 Shell Road Richmond, British Columbia, Canada V6X 2Z9

Tel: (604) 278-3411 Telex: 04-355599

Products: remote sensing data acquisition systems; satellite ground stations for reception and processing of earth resources from LANDSAT data; meteorological data systems; air/shipborne and submersible data acquisition systems; image analysis systems for classification and precision registration of LANDSAT data; digital data acquisition systems for environmental sensing; synthetic aperture radar; data communications systems for: airline flight planning and dispatch, public safety, real-time weather information, vehicular data terminals; remote job entry terminals, digital film image recorders.

### MAGNA INTERNATIONAL INC.

355 Wildcat Road Downsview, Ontario, Canada M3J 2S3

Tel: (416) 661-1485

**Products:** electronic chassis and sub-assemblies for aerospace;

aluminum dip brazed assemblies; machined pure beryllium; cartridge and propellant activated devices for aircraft escape systems.

### MAGNETIC METALS LTD.

10 Spalding Drive Brantford, Ontario, Canada N3T 5T3

Tel: (519) 753-8675 Telex: 061-8126

**Products:** laminations for electric

motors and transformers.

### K.O. MAIR ASSOCIATES LTD.

145 Spruce St.

Ottawa, Ontario, Canada K1R 6P1

Tel: (613) 238-7766 Telex: 053-4916

**Products:** Specializes in Digital's LSI-11 family of microcomputers; packaging, special I/O modules

and options.

### MARK PRODUCTS LTD.

1108 - 5th Avenue NE Box 73, Stn. "M" Calgary, Alberta, Canada T2P 2G9

Tel: (403) 275-3544

Products: seismic cables and

geophone arrays.

# MATROX ELECTRONIC SYSTEMS LTD.

5800 Andover Avenue Town of Mount Royal, Quebec, Canada H4T 1H4

Tel: (514) 735-1182 Telex: 05-825651

**Products:** graphics and alphanumeric plug-in modules and video boards in both black and white and in color for the industry's most popular buses; modular OEM computers based on Z-80A (8-bit) and 8086 (16-bit) CPU; memory boards, floppy-disk interfaces, special boards, system chassis, etc.

### MAXTOWER CO. LTD.

5 Edmondson Street, Box 277, Brantford, Ontario, Canada N3T 5M8

Tel: (519) 752-6501 Telex: 061-81135 **Products:** radio, television and communication towers and mounting hardware.

### R.C. MAYBEE LTD.

P.O. Box 40,

Oakville, Ontario, Canada L6J 4Z5

Tel: (416) 637-6261

Telex: 061-8975

**Products:** polygauge digital magnetic thickness sensors.

# McCURDY RADIO INDUSTRIES LTD.

108 Carnforth Road Toronto, Ontario, Canada M4A 2L4

Tel: (416) 751-6262 Telex: 06-963533 Cable: MACMETAL

**Products:** complete broadcast audio line including solid-state consoles, production centres, components, packages and accessories; solid-state intercom systems; pre-wired jackfields; audio distribution systems; audio switchers, consoles, amplifiers and speaker units for educational systems.

### McNEILL ELECTRONICS LTD.

19 Colville Road Toronto, Ontario, Canada M6M 2Y2

Tel: (416) 247-7429

**Products:** transformers — toroidal, pot-core, rf; chokes.

### McPHAR GEOPHYSICS

55 Tempo Avenue Willowdale, Ontario, Canada M2H 2R9

Tel: (416) 497-1700 Telex: 065-25305

Cable: McPHAR TORONTO

Products: airborne, ground and drill hole geophysical instruments for minerals and petroleum exploration; portable proton procession and fluxgate magnetometers; portable scintillometers and gamma ray spectrometers; airborne multichannel spectrometers; drill hole logging systems; airborne and ground electromagnetic systems; induced polarization and resistivity equipment; analog and digital recording systems; minicomputer data acquisition systems; self-potential ground systems.

# McQUEEN TECHNOLOGY CORP. LTD.

93 Regal Road P.O. Box 1850 Guelph, Ontario, Canada M1H 7A1

Tel: (519) 836-1010

**Products:** line-monitoring equipment.

# MECHRON ENGINEERING PRODUCTS LTD.

2437 Kaladar Avenue Ottawa, Ontario, Canada Tel: (613) 733-3855

Telex: 053-4271

**Products:** auxiliary and primesource power systems for telecommunications; communication dc power supplies and distribution; rotary uninterruptable power supply systems — all available in self-contained modules.

# MECHTRONICS RESEARCH CORPORATION

1727 West 2nd Avenue Vancouver, British Columbia, Canada V6J 1H8

Tel: (604) 736-2671 Telex: 04-508777

**Products:** marine controls and instruments: 360° steerable propulsion controls; multiplex alarm-monitoring system; propulsion telegraph; industrial automated process controls.

### MEGA SYSTEM DESIGN LTD.

1766 Midland Avenue Scarborough, Ontario, Canada M1P 3C2

Tel: (416) 751-1935

Products: custom-designed electronic devices; electromechanical and specialized custom machinery and equipment; microwave industrial dryers; microwave moisture sensors; special-purpose applicator chambers and power supplies; custom small precision machinery.

### **MEMOTEC**

4940 Fisher Street Montreal, Quebec, Canada H4T 1J5

Tel: (514) 738-4781 Telex: 05-825625

**Products:** network processors for X.25 packet switching networks; X.25 statistical multiplexers; X.25

mini nodes; support of asynchronous and synchronous protocols, including IBM 3270, BSCIII.

### MESOTECH SYSTEMS LTD.

2830 Huntington Place Port Coquitlam, British Columbia, Canada V3C 4T3

Tel: (604) 464-8144 Telex: 04-353637

**Products:** underwater acoustic equipment, including sonar, positioning systems, underwater telephones, acoustic releases, transponders, pingers, acoustic telemetry.

### **MICRODESIGN LIMITED**

36B Prince Arthur Avenue Toronto, Ontario, Canada M5R 1A9

Tel: (416) 922-4180

**Products:** microprocessor-based telecommunications products; satellite ground stations; computer graphic terminals; product design services.

### MICROTRONIX SYSTEMS LTD.

120 Bessemer Road London, Ontario, Canada N6E 1R2

Tel: (519) 681-3430

**Products:** custom-designed and built equipment for the telephone industry.

# MILLER COMMUNICATIONS SYSTEMS LTD.

300 Legget Drive Kanata, Ontario, Canada K2K 1Y5

Tel: (613) 592-3020 Telex: 053-4164

**Products:** low-cost satellite ground stations; voice and data modem equipment; forward error-correcting coding equipment; phase lock loop receivers; TV multiplexer; teleconferencing systems via satellite; HF radio receivers; TDMA channel equipment; defense-related electronics.

### **MILLTRONICS**

730 The Kingsway Peterborough, Ontario, Canada K9J 6W6

Tel: (705) 745-2431 Telex: 06-962851

Products: conveyor scales; feed-

rate control system; flow metering; level measuring; monitors; tachometers; tilt switches; transducers; dataacquisition systems.

### MINI-PERIPHERALS INC.

2224 Innes Rd. Ottawa, Ontario, Canada

K1B 4C4

Tel: (613) 837-2410 Telex: 053-4979

Products: microprocessor-based numeric controllers, vending-machine controllers, small-business systems, pollution-control systems, custom Winchester add-ons, touch-sensitive keyboards, RS-232 floppy disk files, interfaces, add-on RAM memory boards.

### MIRA ELECTRONICS LTD.

Box 2145, Station B Scarborough, Ontario, Canada M1N 2E5

Tel: (416) 265-3020

**Products:** data-communications controllers; various-purpose including data encryption.

### MIRTONE INDUSTRIES LTD.

425 Alness Street, Downsview, Ontario, Canada M3J 2H4

Tel: (416) 667-1211 Telex: 06-217501

**Products:** apartment, fire alarm and communication systems.

### MITEC ELECTRONICS LTD.

104 Gun Avenue, Pointe Claire, Quebec, Canada H9R 3X3

Tel: (514) 694-8666 TWX: 610-421-3572

**Products:** microwave components and subsystems for the telecommunications industry, satellite communications, and military applications.

### MITEL CORP. LTD.

P.O. BOX 13089 Kanata, Ontario, Canada

K2K 1X3

Tel: (613) 592-2122 Telex: 053-4596 TWX: 610-562-8529 Cable: MITELCAN

**Products:** telephone signalling converter equipment including tone to pulse; DTMF and MF

receivers; tone generators, toll denial system; speed dialer system; key system intercom; line event displays; RZ forward and backward receivers, rural telecoms equipment; PBX; security equipment; CMOS integrated circuits, including Telecom LSI, microprocessor and memory, interface, and display; thickfilm hybrid Telecom circuits; ISO-CMOS VLSI.

### MONITEQ LTD.

630 Rivermede Road Concord, Ontario, Canada L4K 1B6

Tel: (416) 669-5334 Cable: Monteq Toronto

**Products:** stack monitors for CO/CO<sub>2</sub>; ambient monitors for various gases; remote sensors.

### MOSAID INC.

Box 13579 Kanata, Ontario, Canada K2K 1X6

Tel: (613) 836-3134 Telex: 053-4986

**Products:** design and assembly

of silicon chips.

### MOTOROLA CANADA LTD.

3125 Steeles Avenue East Willowdale, Ontario, Canada M2H 2H6

Tel: (416) 499-1441 Telex: 065-25191 Cable: MOTOROLA

**Products:** VHF and UHF mobile-radio products including base, mobile, portable and paging equipment and accessories; VHF and UHF radio-relay products including point-to-point multi-channel equipment and accessories; alarm and control system.

### MUIRHEAD SYSTEMS LTD.

50 Galaxy Boulevard, Unit 4 Rexdale, Ontario, Canada M9W 4Y5

Tel: (416) 675-7450 Telex: 06-989264

**Products:** custom design and manufacture of graphic processing and facsimile communication systems: facsimile switching systems; meteorological radar remoting; computer facsimile interface; compact airborne and shipboard facsimile transmitters.

### MULTI-VOX LTD.

9967 St. Michel Boulevard Montreal, Quebec, Canada H1H 5G7

Tel: (514) 321-3131

**Products:** intercommunication systems for commercial, industrial, educational and institutional applications; complete line of solid-state commercial amplifiers; sound columns.

### MURATA ERIE NORTH AMERICA INC.

5 Fraser Avenue Trenton, Ontario, Canada K8V 5S1

Tel: (613) 392-2581 Telex: 06-62279

**Products:** high-voltage power supplies, voltage multipliers and rectifiers; electromagnetic interference filters; ceramic capacitors; filter connectors.

### N

### NCR CANADA LTD.

6855 Century Avenue Mississauga, Ontario, Canada Tel: (416) B26-9000

Telex: 06-960147

**Products:** company designs, develops and manufactures financial document-processing systems for the international financial community.

# NABU COMMERCIAL TERMINALS

330 Weber Street North Waterloo, Ontario, Canada N2J 3H6

Tel: (519) 884-9300 Telex: 069-55327

**Products:** alphanumeric terminals and peripheral equipment featuring modular design, software programs that allow overseas distributors to make customized terminal modifications. Terminals can be supplied with national character sets and communication-code protocols.

# NABU MANUFACTURING CORP.

485 Richmond Rd. Ottawa, Ontario, Canada K2A 3Z2

Tel: (613) 725-3300 Telex: 053-4894

Products: cable converters and

cable-network-compatible personal computers for home and small-business use. At cable headend, NABU offers full database and communications facility within local system (using Telidon) and access to remote databases.

### NATIONAL ELECTROLAB LTD.

1536 Columbia Street North Vancouver, British Columbia, Canada V7J 1A4

Tel: (604) 985-0511 Telex: 043-52683

Products: AM broadcast: AM RF amplifiers; off-air receivers: telephone instruments: recordercontroller for monitoring of telephone signalling; T1 PCM error generator; T1 cable test set; engineering and installation services; design and manufacture of custom instruments and equipment; repair, overhaul and calibration of electrical and electronic instruments, test equipment, meters, etc., for science, government and industry; electrical metrology lab for precise calibration.

# NAUTICAL ELECTRONIC LABORATORIES LTD.

RR No. 1 Tantallon Halifax County, Nova Scotia, Canada BOJ 3J0

Tel: (902) 823-2233/4 Telex: 019-22552

**Products:** solid-state LF non-directional radio-beacon systems for aeronautical and marine navigation with output powers up to 4 kW; beacon monitor receivers; automatically tuned LF/MF antenna systems; solid-state broadcast transmitters; LF, MF and HF solid-state communications transmitters.

### NAVTEL LTD.

Telex: 06-964610

8481 Keele Street Unit 11 Concord, Ontario, Canada L4K 1B1 Tel: 669-9918

**Products:** data communications test equipment.

### NEOSID (CANADA) LTD.

10 Vansco Road Toronto, Ontario, Canada

M8Z 5J4

Tel: (416) 251-2831

Telex: 06-986766 ATN NEOSID

Cable: NEOSID

**Products:** electronic-powdered iron and ferrite core components;

microwave materials.

### NIFE-POWERTRONIC CORP.

125 Nantucket Boulevard Scarborough, Ontario, Canada M1P 2N8

Tel: (416) 757-5151 Telex: 06-963757

**Products:** battery chargers/rectifiers; inverters; uninterruptible power supplies; voltage regulators; AC-DC converters; frequency converters; nickel-cadmium batteries.

# NORAM QUALITY CONTROL & RESEARCH EQUIPMENT LTD.

103 Gun Avenue Pointe Claire, Quebec, Canada H9R 3X2

Tel: (514) 694-4522 Telex: 05-822730

**Products:** electronic equipment for specialized physical testing in pulp and paper industry.

# NORMEX INTERNATIONAL INC.

1930 Champlain St. Montreal, Quebec, Canada H2L 2S8

Tel: (514) 526-1637 Telex: 055-61968

**Products:** Plant automation systems, conveyor automation, programmable controllers, meteorology data-acquisition equipment.

### NORPAK LTD.

10 Hearst Way Kanata, Ontario, Canada K2L 2P4

Tel: (613) 592-4164 Telex: 053-4174

**Products:** interactive computer graphics and image-processing systems; Telidon videotex system hardware; electronic slide projection systems.

Services: page-designing and page-creation services and operator training; design and manufacture of systems for educational applications and process control, and computer-aided design systems for industrial and commercial use.

### **NORTHERN TECHNOLOGIES**

20 Steelcase Rd. W. Unit 12 Markham, Ontario, Canada

L3R 1B2

Tel: (416) 495-6940

**Products:** computer terminals, microcomputer boards, custom interfaces, miscellaneous cables.

### NORTHERN TELECOM LTD.

33 City Centre Drive Mississauga, Ontario, Canada L5B 3A2

Tel: (416) 275-0960 TWX: 610-492-4388

Products: common-control crossbar telephone switching exchanges; stored-program electronic digital and analog telephone switching exchanges; microwave radio and coaxial transmission systems — long and short-haul; light and heavy route multiplex — digital and analog; private branch exchanges crossbar and analog and digital electronic; digital data switching system; distributed data processing and terminal equipment; key telephone systems; business interphone systems; telephone sets — business and residential; integrated voice and data systems; telephone head sets lightweight and standard; coin telephone sets — box and panel; test equipment; connecting blocks; loading coils; filters; protectors; power plants; amplifiers. Fiber optics systems for telecommunications applications. Product trade names include the SL Family of digital business communications systems; Pulse — a PBX; Imagination, Contempra and Logic telephone apparatus and Companion, a handsfree speakerphone; DMS, a complete family of digital transmission and central office switching exchanges; DMS-1 and DMS-1A digital subscriber carrier systems; and TOPS, the traffic operator position system, a member of the SP-1 family of switches; SL-10 data packet switching system; Display-phone integrated voice and data terminal.

### NORTHWAY-GESTALT CORP.

1450 O'Connor Drive Toronto, Ontario, Canada M4B 2V2

Tel: (416) 755-1141

Telex: 06-963518

Cable: NORTHWAY TORONTO

Product: photomapper.

### **NOVATECH DESIGNS LTD.**

830 Pembroke Street Victoria, British Columbia, Canada V8T 1H9

Tel: (604) 381-1121 Telex: 049-7390

**Products:** design and manufacture of radio direction-finding equipment, tensionometers, which monitor water quality in fish hatcheries.

# NOVATRONICS OF CANADA LTD.

P.O. Box 610 677 Erie Street Stratford, Ontario, Canada N5A 6V6

Tel: (519) 271-3880 TWX: 610-355-8717

Products: high performance stepper motors with special shafts for computer and printer applications; electromagnetic wheel-type digital indicators for high readability requirements; power failure flags; fast response industrial DC motors and amplifier systems for automatic positioning; synchros, servos and DC control motors; precision electromechanical components.

### **NOVAX INDUSTRIES CORP.**

658 Derwent Way New Westminster, British Columbia, Canada V3M 5P8

Tel: (604) 525-5644 Telex: 04-351168

**Products:** microcomputer-based industrial and traffic signal control equipment; telephone power equipment.

### NUMEC LTD.

96 Bowes Road P.O. Box 862 Concord, Ontario, Canada L4K 1C8 Tel: (416) 669-2579

**Products:** Airborne geophysical data acquisition systems, drill-hole equipment, magnetometers, electromagnetic systems.

### NU RAD INSTRUMENTATION

93 Brahms Avenue Willowdale, Ontario, Canada M2H 1H5

Tel: (416) 493-8788

**Products:** radiation counter used in monitoring radon gas in mines.

### O

# OMNITECH GRAPHICS SYSTEMS INC.

880 Wellington Street, 7th floor Ottawa, Ontario, Canada K1T 1H5

Tel: (613) 232-1747 Telex: 053-4332

**Products:** CAD/CAM systems for architectural, land development, mechanical drafting, harness assembly, wiring diagrams, printed circuit boards, service bureaus, plant layout complete with an integrated relational data-base capability and materials and costing take-offs.

### OPTOTEK LTD.

1283 Algoma Road Ottawa, Ontario, Canada K1B 3W7

Tel: (613) 746-3100 TWX: 610-562-1916

Products: solid-state lightemitting device for applications such as alphanumeric displays, film and paper annotation, failure warning, integral lighting lamps, and card and tape readers; lightemitting diodes (solid-state) highresolution multi-mode matrix displays; electronic subsystems for the above; and, under research and development, CMT/IR detectors and gallium arsenide field effect transistors (FET).

### ORCATECH INC.

26B0 Queensview Drive Ottawa, Ontario, Canada K2B 8H6

Tel: (613) 820-9602 Telex: 053-3868

Telex: 06-217652

**Products:** graphic computer system combines high resolution, monochrome and color raster graphics.

# OVAAC8 INTERNATIONAL (CANADA) INC.

4800 Dufferin Street Suite 202 Downsview, Ontario, Canada M3H 5S9 Tel: (416) 661-5088

**Products:** digital imageprocessing and informationmanagement and control systems for analysis, classification and radiometric/geometric correction of satellite, aircraft, microscope, x-ray, and other digital image data. Systems provided in turnkey packages with wide range of data input/output equipment options. High-speed programmable processor to improve performance of minicomputers. High-speed processor for specialpurpose data processing also requiring complex control and data I/O manipulations.

### OWL INSTRUMENTS LTD.

61 Alness Street Downsview, Ontario, Canada M3J 2H2

Tel: (416) 661-1586 Cable: OWLINST

**Products:** radio-frequency lesion makers; intensive care monitoring system; heart-rate indicators; aerobic fitness tester; exercise equipment.

### P

### P C WORLD CIRCUITS INC.

250 Finchdene Square Scarborough, Ontario, Canada M1X 1A5

Tel: (416) 299-4000

Products: printed circuit boards.

### P.G. ELECTRONICS

Division of Abcal Ltd. 90 Signet Drive, Unit 19 Weston, Ontario, Canada M9L 1T4

Tel: (416) 741-7682

**Products:** receiver multicouplers, preamplifiers, power amplifiers to 220 MHz and 100 watts, bandpass filters for mobile applications.

### PSB SPEAKERS INC.

480 Dutton Drive Waterloo, Ontario, Canada N2L 4C6 Tel: (519) 884-5440

Products: loudspeaker systems.

### PACIFIC METER INC.

P.O. Box 1011, Station A
Delta, British Columbia, Canada
V4M 3T2

Tel: (604) 943-8315

Telex: 04-355709

**Products:** SONIC-1010® doppler-effect ultrasonic flowmeters — portable and fixed-installation flowmeters for process control, sewage and waste-treatment plants, as well as other applications within industrial, commercial and municipal areas.

### PAISLEY RESEARCH LTD.

135 Torbay Road Markham, Ontario, Canada L3R 1G7

Tel: (416) 475-7798 **Product:** loudspeakers.

## PAN CANADA MAGNETICS LTD.

1072 Rangeview Road Port Credit, Ontario, Canada

L5E 1H3

Tel: (416) 278-9851 Telex: 06-960159

**Products:** audio magnetic recording tape, including hubwound tape for loading cassettes and cartridges.

# PATRICK COMPUTER SYSTEMS INC.

11 Plymouth St. Winnipeg, Manitoba, Canada R2X 2V5

Tel: (204) 632-9128 Telex: 07-55731

**Products:** iC 436 computer. Multiuser, multi-tasking; 131 solid-state programmable keyboard; four disk drives, 4Z-80A microprocessors, 114K byte (RAM) memory, one daisywheel printer.

### **PAYTON ASSOCIATES LTD.**

120 Milner Avenue, Unit 9 Scarborough, Ontario, Canada M1S 3R2

Tel: (416) 298-9600 Telex: 065-25312

**Products:** medical electronics, particularly aggregation modules used in testing blood plasma.

### PERLE SYSTEMS LTD.

360 Tapscott Road Scarborough, Ontario, Canada M1B 3C4

Tel: (416) 299-4999 Telex: 065-26123

**Products:** microprocessor-based electronic subsystems, PDS 327 series protocol converters ASCII to Bisync/SMA, PDS 400 ATM trans-

action switch and network controller for banking applications; floppy disc recorders; and products made to customer specifications.

### **PHALO COMMUNICATIONS**

3530 Pharmacy Avenue Scarborough, Ontario, Canada M1W 2T9

Tel: (416) 498-9680

**Products:** fiber optic couplers for data processing applications.

### PHILIPS ELECTRONICS LTD.

601 Milner Avenue Scarborough, Ontario, Canada M1B 1M8

Tel: (416) 292-5161 Telex: 065-25100

Cable: PHILIND TORONTO

**Products:** ground based instrument landing systems and other aeronautical navigational aids; quartz frequency-control crystals; video display units and related products; switch mode power supplies.

# PHILIPS INFORMATION SYSTEMS LTD.

601 Milner Avenue Scarborough, Ontario, Canada M1B 1M8

Tel: (416) 292-5161 Telex: 065-25100

Cable: PHILIND TORONTO **Products:** Micom word processing systems.

### PHILLIPS CABLES LTD.

550 King Street West Brockville, Ontario, Canada

K6V 5W4

Tel: (613) 345-5666

**Products:** communications wire and cable, submarine cable, low and high voltage power cable, overhead line (ACSR) conductors, downwell pump cable, copper rod, fiber optic cable.

### PHOENIX AUTOMATION INC.

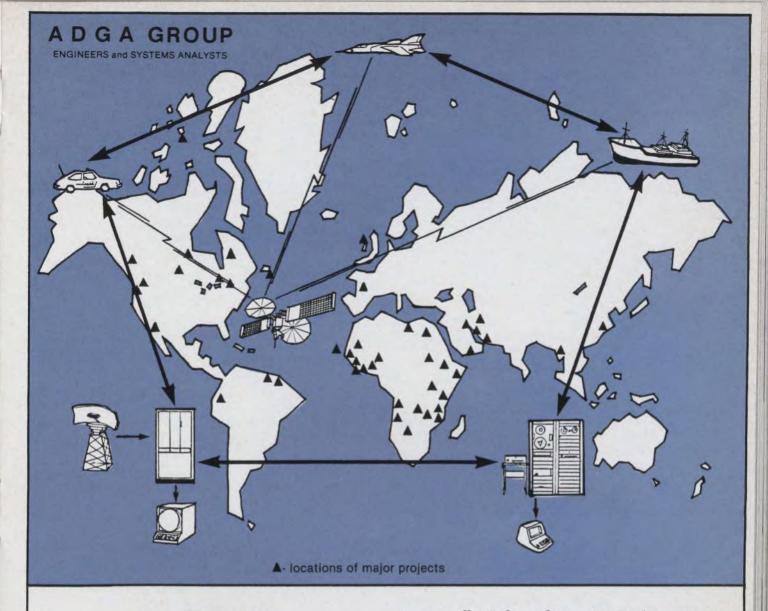
100 Argyle Avenue Ottawa, Ontario, Canada K2P 1B6

Tel: (613) 233-7777 Telex: 053-4890

**Products:** SPD-101 computeraided design/drafting system.

### PHOENIX GEOPHYSICS LTD.

200 Yorkland Boulevard Willowdale, Ontario, Canada



# GLOBAL CAPABILITY

ELECTRONICS CONSULTING ENGINEERS LAND, AIR AND MARINE TRANSPORTATION AND COMMUNICATIONS SYSTEMS

CONCEPT - DESIGN - IMPLEMENTATION TRAINING - OPERATION - MAINTENANCE

### GENERAL

The ADGA Group is a professional consulting engineering organization established in 1967, with Headquarters in Ottawa, Canada and Associate offices throughout the world. Company consultants specializing in electronic systems have planned, designed, installed, operated and maintained technically oriented systems in all modes of the transportation and telecommunications fields.

As a totally independent organization our two hundred and fifty management and engineering specialists have successfully completed major consulting projects in Africa, the Middle-East, Far East, South America and in the North American continent. Our company capabilities are well known in engineering computer and management systems with EXPERTISE IN:

- air traffic control
- marine traffic control
- radio communications
- telephone switching
- navigational aids
- radar display
- microwave
- airport systems
- harbour systems
- statellites
- related civil works

adga

116 ALBERT ST. OTTAWA, ONTARIO CANADA K1P 5G3

TEL.: (613) 237-3022 TELEX: 053-4568 CABLE: ADGA OTT Mark of a leader.
Caxton's moveable type completely changed
English society.



William Caxton's device: his initials and trademark (circa 1475.) Courtesy of the John M. Wing Collection. The Newberry Library, Chicago.

Mark of a leader. By merging computers and telecommunications, Northern Telecom is changing the way the world communicates.

# northern telecom

In 1475 when William Caxton printed the first English book, he started a quiet revolution. A free flow of ideas makes constant change inevitable.

Northern Telecom started its own quiet revolution, one that's also radically changing the way ideas are communicated. We were the first company to design and produce a full line of digital switching systems, the telecommunications technology that transmits both voice and data with digital signals.

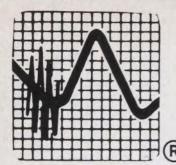
Our success convinced many sceptics that digital communications was truly the wave of the future. As private and public digital networks grow, an international web of integrated voice and data communication is gradually being created. Instantaneous access to global data banks is

becoming a reality.

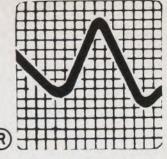
Today Northern Telecom is a world leader in digital switching systems, in related technologies-fiber optics, large-scale integrated circuits and in electronic office systems.

We're making our mark in the Intelligent Universe.

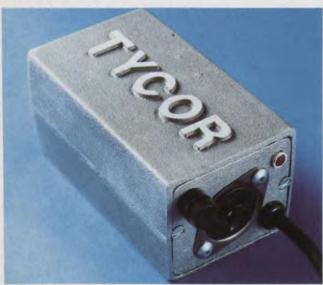
For more information on Northern Telecom and its products contact: Northern Telecom Limited, Corporate Relations Department, 33 City Centre Drive, Mississauga, Ontario L5B 2N5, Tel. 416- 275-0960.



# **TYCOR® POWER LINE FILTER**



The Tycor® Power Line Filter is designed to eliminate voltage impulse transients and other unwanted noise signals conducted along A.C. power lines. The device filters electromagnetic interference propagating into or out of electronic equipment that are susceptible to or generate such signals. Tycor® Power Filter suppress noise signals on power lines generated by radio frequency interference. Limits voltage to 10% of nominal peak value.



TYCOR® ELECTRONIC PRODUCTS LTD. No. 9 - 6115 - 3rd Street S.E., Calgary, Alberta T2H 2L2 Phone (403) 259-3200 Telex Number - 03-825842

Incident Rate of Harmful Power Line Disturbances

Type of Disturbance	Occurrences per Month	Percent of Total	Major Problem Sources (88.5% o Total)
Decaying Oscillatory Transients (15% threshold)	62.6	49.0%	
Voltage Spikes (25% threshold)	50.7	39.5%	
All Others	15.0	11.5%	
Total	199.3	100%	7

### Application Information

Successful and reliable operation of computer systems, communication systems and other sensitive electronic measurement, control and data processing equipment requires that the power supply be free of electrical interference. Electrical interference in the form of transient impulses and ringing originates from the switching of inductive loads (e.g. fault interruption, load correction) motor drives, light and heater controls, lightning etc. These and other interferences can cause damage, costly shutdowns, erroneous data and false alarms. The Tycor® Power Filter eliminates these and other problems caused by power line interference and also provides for lightning protection.

### **Applications**

- Micro Computers
- Computer Systems
- · Graphics Systems
- Medical Equipment
- · Communication Equipment
- Process Controllers
- Word Processors
- Cash Registers
- Other Sensitive Electronic Equipment

Standard Series Filters -3, 5, 10, 20, 30 amps.

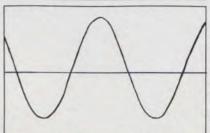
-120 - 208 - 230 volts

Special Order -2 & 3 phase

-Non-standard Voltages -50 & 100 amp. units



This illustration depicts noise on a typical sine wave. This type of disturbance can cause program errors, memory loss and even equipment damage.



This illustration depicts a sine wave of clean power after the installation of Tycor Power Line Filter.

Dealer Inquiries Invited.

**OEM Discounts** Available

M2J 1R5

Tel: (416) 493-6350 Telex: 06-986856

Products: instruments, systems and services for mineral exploration based on induced polarization, resistivity, magnetotelluric and EM methods; multi-frequency phase or spectral-induced polarization systems, enabling discrimination between mineral targets of inherently different grain size or texture; tensor MT systems for geothermal and petroleum exploration featuring on-site data processing to verify data quality, provide real-time

# PHOTOCHEMICAL RESEARCH ASSOCIATES INC.

visual display and generate report

45 Meg Drive London, Ontario, Canada N6E 2V2

quality hard-copy plots.

Tel: (519) 686-2950 Telex: 064-7597

**Products:** pulsed light sources; nanosecond light sources; arc lamp systems; integrated arc lamp systems; nanosecond fluorometers; power supplies; nitrogen lasers; HeNe lasers; photon counting NIM electronics.

### PHOTOVAC INC.

Unit 2, 134 Doncaster Avenue Thornhill, Ontario, Canada L3T 1L3

Tel: (416) 881-8225 Telex: 06-964634

**Products:** Portable gas chromatographs for trace gas detection.

### PIRELLI CABLES INC.

65 Richelieu, P.O. Box 70 Saint-Jean-sur-Richelieu, Quebec, Canada J3B 6Z2

Tel: (514) 346-6B31 Telex: 05-831532

**Products:** a wide range of telephone-type multi-pair copper conductor, and both loose-tube and tight-jacketed design fibre-optic cables; both copper conductor and fibre-optic cables can be supplied for aerial, direct buried, duct or onsite installation.

### PLESSEY CANADA LTD.

300 Supertest Road Downsview, Ontario, Canada M3J 2M2 Tel: (416) 661-3711 Telex: 065-24488

**Products:** key telephone and PABX equipment.

### POLESTAR ANTENNA CO. LTD.

Hackett's Cove Halifax County, Nova Scotia, Canada

BO1 310

Tel: (902) 823-2442

**Products:** omnidirectional radio beacon transmitting antennas; automatic tuning; power-level capability up to 1 Kw carrier.

# POLESTAR COMMUNICATIONS LTD.

211 Mission Ridge Centre St. Albert, Alberta, Canada T8N 2G4

**Products:** fixed frequency hf transmitters and receivers, uhf repeaters for hostile environments.

**Services:** computer simulation of hf radio paths.

# POLYTRONICS ENGINEERING LTD.

P.O. Box 96, Station A Willowdale, Ontario, Canada M2N 5S7

Tel: (416) 225-2026, (416) 625-1743

**Products:** power-line monitoring equipment, custom electronics, electronic power converters, complete electrical and electronic laboratories for teaching purposes at college and university level.

### POSITRON INDUSTRIES INC.

4810 Jean Talon Street West Montreal, Quebec, Canada H4P 2N5

Tel: (514) 731-3715

Products: telephone and telecommunications equipment, including central office equipment such as electronic trunk switch, an 8-by-8 5-wire matrix to replace ROTS; ringer isolator, fully immune to induced voltages up to 200v, to reduce noise on multiparty lines; teleline isolator, providing up to 65Kv isolation on telephone lines entering power stations; telephone conferencing equipment; event registration; electronic locking interface for call directors to replace mechanical locking; data speed

converter; mobile radio identifier interface; four-way bridge with solid-state hybrid; stand-by power unit for extreme environment; bridging amplifier; base station interface and identifier; automatic disconnect unit for telegraph; remote alarm reporting and control systems; telephone for disabled; optical fibre preparation kit, fusion set and continuity checker; telephone interface device (to computers); Bankerphone - modular multi key telephone set for financial applications with remote line selection and "holler down" circuits.

# PRECISION ELECTRONIC COMPONENTS LTD.

19 Hafis Road Toronto, Ontario, Canada M6M 2V6

Tel: (416) 249-7103 Telex: 06-969671

**Products:** variable resistors, attenuators, trimmers potentiometers; hot moulded carbon composition and cermet.

# PRESENTEY ENGINEERING PRODUCTS LTD.

P.O. Box 919 27B4 Fenton Road, RR No. 5 Ottawa, Ontario, Canada K1G 3N3

Tel: (613) B22-1251

**Products:** recorder — continuous A/N-TSH-501 reproducer sound; rocket subcommutator; longrange communications terminal; (LRCT) airborne magnetic tape recorder; DC amplifier systems; camera control units; tactical recorder — reproducer sound; continuous marine broadcast rec/rep system; universal remote control systems for forward area tactical radio sets; airborne memoloop tape recording systems; shipborne radio operator control consoles for communications rooms; shipborne signal patch panel systems; airborne photography annotation systems; airborne data logger (pitch and roll); custom design and manufacturing; repair and overhaul. VOX-systems; airport transmissometers; icebreaker communications control systems.

### PRESTOLITE BATTERY

8301 Keele Street Maple, Ontario, Canada LOJ 1E0

Tel: (416) 667-0742 Telex: 06-964651 **Product:** batteries.

### PRIOR DATA SCIENCES LTD.

16 Credit Union Way Ottawa, Ontario, Canada K2H 8R6

Tel: (613) 820-7235 Telex: 053-3356

**Products:** real-time systems engineering development; typical applications: supervisory control and data acquisition (SCADA), computer-aided dispatch, process control, graphics displays and military systems development.

### W.C. PURSLEY LIMITED

3151 Lenworth Drive Mississauga, Ontario, Canada L4X 2G7

Tel: (416) 625-2222 Telex: 06961228

**Products:** cabinets, enclosures and custom metal fabricating for the electric and electronic industries.

# PYLON ELECTRONIC DEVELOPMENT CO. LTD.

2300 Victoria Street Lachine, Quebec, Canada H8S 1Z3

Tel: (514) 637-1186 Telex: 05-821680

Products: static power supplies; DC-DC converters and inverters; ringers; ring, talk and signal supplies; fuse alarm and meter panels; battery eliminators; meter pulse generators; digital clocks; alarm systems, digital controls; electronic trunk selectors for ROTS and CAMA applications; custom switching equipment and telephone conferencing equipment; special products including custom assembly and instrumentation; time code generator; uranium detection equipment; radioactive sources; radon and thoron gas detectors; antenna switching instruments; loop back units; aluminum transit cases; and custom engineering services.

### **PYLON ELECTRONICS LTD.**

147 Colonnade Road Ottawa, Ontario, Canada K2E 7L9

Tel: (613) 225-7920 Telex: 053-4961

**Products:** geophysical and nuclear measurement equipment.

### PYLONEX INC.

45 Dorchester Street South Quebec, Quebec, Canada G1K 5Y1

Tel: (418) 524-5221 Telex: 051-3868

**Products:** transmission line towers and allied products; microwave towers and antennas; TV towers; custom galvanizing using dry hot-dip process; general machine-shop and plate-shop works.

**Services:** engineering; structural analysis; structural and mechanical drawings; tower installation supervision.

### Q

### QUINDAR PRODUCTS LTD.

106 Rayette Road Concord, Ontario, Canada L4K 1B6

Tel: (416) 669-1272 Telex: 06-964574

**Products:** electronic equipment for remote-control supervision and telemetry; multiplexing systems; data modems; communications amplifiers, related equipment and accessories.

### **QUOPRO DATA SYSTEMS LTD.**

501 Krug St. Suite 200 Kitchener, Ontario, Canada N2B 1L3

Tel: (519) 576-4480

**Products:** computerized clock-calendar device, as well as 16-bit Pascal-oriented computer system executing compiled Pascal "D" codes.

### R

### RCA LTD.

Royal Bank Plaza, North Tower P.O. Box 161, 23rd Floor Toronto, Ontario, Canada M5J 2J4

Tel: (416) 865-7960 Telex: 065-24136 TWX: 610-491-2185

**Products:** color picture tubes;

photo sensors.

### RDC ELECTRONICS INC.

8421 Darnley Road Montreal, Quebec, Canada H4T 1X2

Tel: (514) 733-7181 TWX: 610-421-4483

**Products:** printed circuit boards; single-sided, double-sided and multi-layers; staked pin back-

panels.

### R-METRICS LTD.

486 Wyecroft Road Oakville, Ontario, Canada L6K 2G7

Tel: (416) 845-6036

**Products:** nuclear instrumentation; gamma radiation survey meters; dosimeter chargers; ionization chamber detectors; radiac calibrators; power supplies.

### RMS INDUSTRIAL CONTROLS INC.

70 Williams Street Port Moody, British Columbia, Canada V3H 2R5

Tel: (604) 461-1315 Telex: 04-353612

Products: microprocessor-based telemetry systems; radio remote controls for industrial equipment; monitoring and supervisory control systems; data-acquisition and control systems; radio telemetry equipment, RS232 radio.

### RACAL (CANADA) LTD.

1806 Woodward Drive Ottawa, Ontario, Canada K2C 0P7

Tel: (613) 225-4640 Telex: 053-4187

Cable: RACOTT OTTAWA

Products: HF radio communications systems and ancillary equipment; communications systems; engineering and maintenance services; remote control systems; receiving antenna switching systems; digital time insertion generator/reader units for use with air traffic control recorders.

### RACAL-DECCA CANADA INC.

71 Selby Road

Brampton, Ontario, Canada

L6W 1K5

Tel: (416) 457-8720 Telex: 06-97699

Cable: DECRADAR TORONTO

**Products:** antenna mast and tower base insulators, quy strain insulators and lighting isolation transformers; static drain resistors.

### RADIONICS LTD.

1240 Ellesmere Road Scarborough, Ontario, Canada M1P 2X4

Tel: (416) 292-1575 Telex: 06-963726

**Products:** Digiecho 1100 compact digital echoencephalograph; Digiecho 2000 recording digital echoencephalograph; 3000 echo oculometer; spectrum analyzer 8000: ocular biometer used for interocular lens (IOL) power calculations.

### RANTECH ELECTRONICS LTD.

230 Canarctic Drive Downsview, Ontario, Canada M3J 2P4

Tel: (416) 661-9319

Products: monitoring and supervisory control systems and components; data-acquisition systems; telemetry systems.

### RAYSHIELD LTD.

2630 Royal Windsor Drive Unit 4 Mississauga, Ontario, Canada L5J 1K7

Tel: (416) 822-6100 Telex: 06-982316

Products: steel or copper-mesh RF-shielded enclosures for test labs etc.

### RAYTHEON CANADA LTD.

400 Philip Street Waterloo, Ontario, Canada N2J 4K6

Tel: (519) 885-0110 Telex: 069-5431 TWX: 610-365-3469 Cable: RAYCAN

Products: primary, secondary and weather radar systems and equipment; radar microwave remoting and radar multiplex systems and equipment; analog, digital and scan converted displays; standard and Doppler VOR; distance measuring equipment (DME); microwave systems and equipment, radio, protection switching and supervisory; terrestrial (long haul, and high capacity analog) microwave communications systems; and earth stations for satellite communications. These include stations for transmission and reception of television, voice and data in both the 6/4 and 14/12 GHz bands.

### RED PINE INSTRUMENTS LTD.

Denbigh, Ontario, Canada KOH 1LO

Tel: (613) 333-2776

**Products:** transit-industry automatic passenger-counting systems, custom microcomputer systems.

### RELIANCE TELECOMMUNICA-TION PRODUCTS LTD.

122 Edward Street St. Thomas, Ontario, Canada N5P 1Z2

Tel: (519) 631-0780 Telex: 064-73521

**Products:** battery chargers; inverters; ringing generators; power boards; converters; ringing, tone and interrupter equipment: battery distribution fuse bays; uninterruptible power supplies.

### RELTEK INC.

44 Steacie Drive Kanata, Ontario, Canada K2K 2A9 Tel: (613) 592-2411

**Products:** component reliability enhancement programs; Q.A. manual preparation; microprocessor controllers and acquisition systems.

### REMANCO SYSTEMS LTD.

7 Banigan Drive Toronto, Ontario, Canada M4H 1G4

Tel: (416) 429-6771

Products: stand-alone foodservice/hospitality computer system with integrated service terminals and printers, video screen, electronic keyboard, dualdiskette storage unit, microprocessor control unit (expandable to 1,000 Kb); BASIC language

processor, full user software applications; optional communications capability.

### RENFREW ELECTRIC CO. LTD.

1210 Birchmount Road Scarborough, Ontario, Canada M1P 2C3

Tel: (416) 752-4611 Telex: 06-963527 TWX: 610-941-2287

Products: resistors — carbon composition, precision wire wound, power wire wound (fixed and adjustable), and molded wire wound; thick film metal glaze, variable carbon and wire wound controls; general purpose, time delay and industrial relays; connectors — flat pin and printed circuit board; barrier terminal block; plugs and sockets; coils: and timers.

### **REUTER-STOKES CANADA LTD.**

465 Dobbie Drive Cambridge, Ontario, Canada N1R 5X9

Tel: (519) 623-4880 Telex: 069-59327

**Products:** self-powered neutron detectors and associated electronics; mineral insulated cable; thermocouples; industrial heat stress monitors.

# RIBBONHOUSE ASSEMBLIES LTD.

106 Schneider Road Kanata, Ontario, Canada K2K 1Y2

Tel: (613) 592-5555 Telex: 053-4757

**Products:** supplier of flat ribbon cable assemblies.

### RICHARD BRANCKER RESEARCH LTD.

27 Monk Street Ottawa, Ontario, Canada K1S 3Y7

Tel: (613) 233-1621 Telex: 053-4761

Products: RMS field intensity meter, radon gas detector; plant-productivity fluorometer for biological research in area of photosynthesis; egg-candling unit for agricultural purposes; borehole locator for mining applications; magnetite meter for metal-processing applications; rotary-dial roll restrictor for telephone applications.

# RICHMOND SOUND DESIGN LTD.

1234 West 6th Avenue Vancouver, British Columbia, Canada V6H 1A5

Tel: (604) 734-1217

**Products:** professional audio control products for theatre, broadcast, recording, commercial and industrial applications; complete range of control consoles, audio modules, and custom control systems.

**Services:** audio system consultation for theatres and recording.

# ROCHESTER INSTRUMENT SYSTEMS LTD. (RISCAN)

915 Kipling Avenue Toronto, Ontario, Canada M8Z 5H4

Tel: (416) 233-6218 Telex: 06-967801

**Products:** solid-state visual annunciators; electronic trips and alarms; solid-state signal converters and transducers for processing industries and power utilities; industrial temperature monitors; vibration sensors and monitors; uninterruptible power supplies; sequential event recorders.

# ROCKWELL INTERNATIONAL OF CANADA LTD.

Collins Canada Division 150 Bartley Drive Toronto, Ontario, Canada M4A 1C7

Tel: (416) 757-1101 Telex: 06-963-573

Cable: COLINRAD TORONTO

**Products:** airborne radio communications and navigation equipment; airborne, land mobile and fixed base SSB communications equipment; portable manpack and hand-held HF transceivers; microwave and multiplex equipment; high power H.F. transmitters; maritime HF SSB transceivers with automatic antenna couplers; automatic direction finder-VHF/UHF.

### ROSS VIDEO LTD.

P.O. Box 220 9 Plaza Drive Iroquois, Ontario, Canada KOE 1KO Tel: (613) 652-4889 Telex: 05-811579

**Products:** television production

switchers.

### S

### SED SYSTEMS INC.

P.O. Box 1464 23-66 Avenue CN, Saskatoon, Saskatchewan, Canada S7K 3P7

Tel: (306) 244-0976 Telex: 074-2495 TWX: 610-731-1476

Products: complete satellite earth stations for 4/6 and 11/14 GHz systems; specialize in LNA receiver and filter production; aerospace subsystems for balloon, rocket and satellite systems; instrumentation for agricultural implements, telecommunications systems and power line monitoring.

**Services:** engineering consultants for environmental control of buildings; aerospace and communications systems.

### SR TELECOM INC.

8150 TransCanada Highway St. Laurent, Quebec, Canada H4S 1M5

Tel: (514) 335-1210 Telex: 05-824919

**Products:** SR (subscriber radio) system — brings urban-quality telephone service to rural and suburban areas; provides secure communications, SCADA, and data communications lines for private systems; uses advanced TDMA/DAMA techniques to provide up to 94 circuits to area of 40-km radius.

### SAFT BATTERIES LTD.

1361 Huntingwood Drive, Unit 11 Scarborough, Ontario, Canada

M18 3J1

Tel: (416) 298-7322

**Products:** batteries — nickel-cadmium, alkaline, wet-cell.

### SANDER GEOPHYSICS LTD.

303 Legget Drive Kanata, Ontario, Canada K2K 2B1

Tel: (613) 592-1301 Telex: 053-4755

Products: digital data-acquisition

systems for geophysical environmental and technical data recording; high-resolution magnetometers; airborne gamma-ray spectrometers; airborne cameras for flight-path recovery; airborne electromagnetic survey instruments; custom-designed airborne geophysical survey systems; airborne VLF electromagnetic instruments.

# SANDTRON AUTOMATION LTD.

1404 Wallace Road Oakville, Ontario, Canada L6L 2Y2

Tel: (416) 827-8230 Telex: 06-982382

**Products:** industrial photoelectric controls for production machinery and conveyors; electronic counters for batch control; also cut-to-length controls.

### SCANNEX INTERNATIONAL

125 Norfinch Drive Downsview, Ontario, Canada M3N 1W8

Tel: (416) 667-9900 Telex: 06-217754

**Products:** closed-circuit television; high-security locks; alarm systems.

### SCIEX INC.

Unit 202, 55 Glencameron Road Thornhill, Ontario, Canada L3T 1P2

Tel: (416) 881-4646 Telex: 06-964722

**Products:** mass spectrometers.

### SCINTREX LTD.

222 Snidercroft Road Concord, Ontario, Canada L4K 1B5

Tel: (416) 669-2280 Telex: 06-964570

Cable: SCINTREX TORONTO

Products: fluxgate and proton precession magnetometers for surface, drill hole, observatory and airborne use; susceptibility meters for field and lab measurements; CG series quartz gravity meters for prospecting and geodetic surveys; electromagnetic prospecting systems including tiltangle systems, moving source and fixed source compensation systems; drill hole electromagnetic compensator systems; helicopter and fixed wing airborne electromagnetic systems; frequency and

time domain types induced polarization systems; integral and differential gamma-ray spectrometers for ground, drill hole and airborne applications; radiometric logging equipment for borehole, carborne and airborne use; neutron-prompt gamma-ray activation facility and borehole logging system; research system for study of mill-site ore grade analysis; AC and DC resistivity equipment; analytical instruments for laboratory and field analysis of vapours, water and solid samples for geochemical purposes monitoring instrumentation for nuclear power plants.

### SECURATEST MFG. LTD.

P.O. Box 476 Pickering, Ontario, Canada L1V 2R7

Tel: (416) 928-0293

**Products:** hand-held CT-3A continuity tester.

### SENTROL SYSTEMS LTD.

4401 Steeles Avenue West Downsview, Ontario, Canada M3N 2S4

Tel: (416) 661-7000 Telex: 069-65672

Products: sensors and control instrumentation for the pulp and paper petrochemical, metalworking and other resource industries; pulp and paper sensors and control systems using mini and micro computers with software and hardware for pulp mills and paper machines; sensors and control systems for accurate measurement and control of grammage (basis weight), moisture, caliper, formation, brightness, color, opacity and reel hardness; control systems for petroleum-related industries including pipeline control, supervisory control, process control, batch control and environmental monitoring; steel industry measurement and control systems for coating weight measurement and control, thickness gauges, speed and length gauges, hot and cold rolling mill optical width gauges; fully distributed processcontrol and energy-management systems for total control of all resource industries.

### SHAW FLEXIBLE TUBES LTD.

25 Bethridge Road Rexdale, Ontario, Canada



The Zeeman background correction and other features ensure maximum accuracy and specificity even for on-site trace element analysis.

# The new AAZ-2: a high sensitivity AA analyser that you can operate inexpensively...anywhere!

The Scintrex AAZ-2 is the first trace element analyser equally at home in the field or laboratory. Compact and practical, it produces first order analytical results even when space and power are at a premium. This innovative, simple instrument saves you money through: 1) lower capital and operating costs, 2) ease of operation and 3) portability.

Sensitive and Specific. With a minimum detectable concentration limit commonly less than 1 ppb (ng/ml) for many elements, the AAZ-2 is as sensitive as any flameless AA spectrophotometer you can name. To enhance specificity in complex matrices, its modulated Zeeman technique corrects for background absorption much better than deuterium lamp methods.

Easy to use. Here are some of the features that Scintrex' engineers incorporated to ensure simple operation. First, you can easily install the AAZ-2 by connecting it to an argon gas bottle. You can align a standard cathode lamp and adjust the monochromator for a

new element in a matter of minutes. Once the dry-ash-atomize timing and temperature controls are set for the element being analysed, you pipette a 10 microlitre liquid sample onto the tungsten furnace atomizer and push a button. Within 90 seconds the measurement is complete and the value is displayed.

If desired, the AAZ-2 can communicate the value directly to your microcomputer which you can use to analyse the absorptivity-time curve, process, store and present data.

Use it anywhere. Consider the advantages of doing analyses in a field camp for mineral exploration or in a ship or vehicle for environmental monitoring. You'll avoid errors due to changes in sample composition during transport. You'll also save by not having to return to the field for verification or detailed sampling.

Here are some of the features of the AAZ-2 which contribute to its portability and ease of use: 1) the instrument weighs only 2€ kg and is the size of an

office electric typewriter, 2) it consumes only 15% of the electrical energy and 50% of the argon required by most flameless AA units, 3) precise voltage regulation ensures that results are unaffected by line voltage changes, permitting use with a motor generator, and 4) gas cooling eliminates the need for water and plumbing.

Reliability. Yes, you can transport the AAZ-2 and expect it to work. The simplicity of the design and Scintrex' more than 25 years of experience in producing precision instruments for worldwide geophysical and geochemical prospecting are your insurance.

Need to know more? For a detailed brochure describing the AAZ-2 or a demonstration, perhaps even in your own lab, contact Scintrex at 222 Snidercroft Road, Concord, Ontario, Canada, L4K 1B5, telephone (416) 669-2280, telex 06-964570.

SCINTREX

M9W/1M7

Tel: (416) 743-7111 Telex: 06-989435

Products: electronic-instrument

wire and cable.

### SIEMENS ELECTRIC LTD.

7300 Trans Canada Highway Pointe Claire, Quebec, Canada H9R 4R6

Tel: (514) 695-7300 Telex: 05-822778

**Products:** design, manufacturing, marketing and servicing of electrical and electronic products and systems for utilities, industry, medicine and science.

### SILONEX INC.

2150 Ward Street Montreal, Quebec, Canada H4M 1T7

Tel: (514) 744-5507 TWX: 610-421-3362 Cable: NATSEMICO

**Products:** cadmium sulphide photoconductive cells; cadmium selenide photoconductive cells; silicon photodiodes; photocell lamp assemblies; silicon phototransistors; photoelectric arrays; optocouplers; silicon solar panels.

### SILTRONICS LTD.

436, Highway 7 Kanata, Ontario, Canada K2L 179

Tel: (613) 836-5003 Telex: 053-3936

**Products:** custom and specialpurpose silicon integrated circuits.

### SIMTRON LIMITED

494-1 The Queensway Peterborough, Ontario, Canada K9J 7L9

Tel: (705) 743-6903

**Products:** design, manufacture and servicing of products for the communications, air, maritime and ground transportation markets; primarily designing and supplying communications systems and equipment to the avionics and telecommunications industries and government agencies: multiplex integrated data-transmission and acquisition systems; defense-related electronics systems; transponder and receiver systems; groundbased avionics test simulators and control systems; equipment for

the nuclear power generation industry; electronic equipment also manufactured to customers' specifications.

### SINCLAIR RADIO LABORATORIES LTD.

122 Rayette Road Maple, Ontario, Canada L4K 1B6

Tel: (416) 669-1244 Telex: 06-964598

Products: antennas for all frequencies specially VHF and UHF; low intermod antennas specifically for multicoupling; DME antennas; filters and filter systems particularly for multicoupling with low intermod, bandpass, low and high pass, band stop, etc.; HF transformers and baluns; active receiver multicouplers; autotuned filters and antenna couplers: consulting services on all antenna and filter systems; measurement services for intermod products, filter characteristics, antenna patterns and impedances; transmitter combiners; isolators; circulators; diplexers/duplexers; Comshel communications shelters; clamps and mounting hardware.

### SIOC LTD.

3085 Lenworth Drive Mississauga, Ontario, Canada L4X 2G4

Tel: (416) 625-1790 Telex: 06-961172

**Products:** monitoring and control devices for process and power industries.

### **SKOTEL CORPORATION**

1445 Provencher Brossard, Quebec, Canada J4W 1Z3

Tel: (514) 465-8990 Telex: 05-267493

Products: generators and readers of SMPTE/EBU time and control code for video and audio tape indexing; both longitudinal and VITC formats are available; options include charactergenerator display, jam sync, and data interfaces for word serial, parallel and RS-232 communications are available.

### S.G. SMALLWOOD LTD.

385 Phillip Street Waterloo, Ontario, Canada N2L 5R8 Tel: (519) 886-4390

AF, IF, RF.

**Products:** components custommade to customer specifications, including filters, crossover networks, IF transformers, coils —

SOCIETÉ D'INNOVATION TECHNOLOGIQUE LTÉE

1033 Rue Du Perche Boucherville, Quebec, Canada J4B 5M8

**Products:** lab equipment for teaching microprocessor technology; bit slice microprocessors; process-oriented microprocessors; communications-oriented microprocessors.

### W. SODIN (GRAVITY) LTD.

211 Hendon Avenue Willowdale, Ontario, Canada M2M 1A9

Tel: (416) 225-4513

Cable: SODINST TORONTO

**Products:** gravity meters for mineral and oil exploration and scientific study.

### SOLA CANADA

377 Evans Avenue Toronto, Ontario, Canada M8Z 1K8

Tel: (416) 252-6465 Telex: 06-984759

**Products:** constant-voltage transformers, up to 500 KVa.

### SOMA ELECTRONICS LTD.

6530 Lawrence Avenue East P.O. Box 212

West Hill, Ontario, Canada M1E 4R5

Tel: (416) 281-5151

Telex: 065-25391 **Products:** loudspeaker systems.

### SONOTEK LTD.

2410-5 Dunwin Drive Mississauga, Ontario, Canada L5L 1J9

Tel: (416) 828-6810 Telex: 065-24733

**Products:** integrated geophysical survey system; data-acquisition systems; digital transducer indicator; digital industrial barometer; radiation integrator; geophysical and meteorological instrumentation.

### **SONSTAR CORPORATION**

Box 13430

Kanata, Ontario, Canada

K2K 1X5 Tel: (613) 839-5572

**Products:** Perimeter intrusion

detection systems.

### SOUTHWELL CONTROLS LTD.

857 West 3rd Street North Vancouver, British Columbia, Canada V7P 1E3

Tel: (604) 980-3688 Telex: 04-352526

**Products:** control systems; tachometers; printed circuit

boards.

### **SPACE CIRCUITS LTD.**

605 Kumpf Drive Waterloo, Ontario, Canada N2J 4A4

Tel: (519) 886-6670 Telex: 069-55326

**Products:** printed circuit boards;

computer back-panels;

multilayers; fine line (0.006 lines and spaces) circuits; "multiwire".

### **SPAR AEROSPACE LIMITED**

Royal Bank Plaza South Tower, Box 83 Toronto, Ontario, Canada M5J 2J2

Tel: (416) 865-0480 Telex: 065-24240 Cable: SPARCAL TOR

Products: remote manipulator systems for space and ground applications; lightweight deployable structures (STEM, Astromast) for space and ground applications; satellites, satellite subsystems and land-based earth stations; infrared surveillance systems; electro-optical systems; transmission systems and equipment; gearboxes; orthophoto and conventional graphic maps.

### SPARTON OF CANADA LTD.

P.O. Box 5125 100 Elm Street London, Ontario, Canada N6A 4N2

Tel: (519) 455-6320 Telex: 064-5876 Cable: SPARTON

**Products:** research, development and manufacture of military and commercial electronic products; three types of passive sonobuoys, and two active sonobuoy designs; transducers; hydrophones; passive intrusion systems consisting of infrared, magnetic,

and seismic sensors. These intrusion devices include datalink units so that systems can be hardwired or wireless linked; regulated power supplies.

### SPERRY INC.

Highway 17, P.O. Box 1300 Rockland, Ontario, Canada KOA 3A0

Tel: (613) 446-6011 Telex: 053-4806 TWX: 610-563-8590

Products: time division multiplexers; modular communication control systems; teletest, videographs; laser ceilometers; depth recorders; horizon bars (for shipboard helio operations); temperature monitoring systems; echo sounders; cordwood modules and cards: headsets: distortion analysers; message generators; Fox test generators; supervisory control; marine telephone; variosens (water pollution monitor); aircraft flight instruments; marine radars; cable harnesses.

Services: repair and overhaul of air and marine electronics with special emphasis on flight instruments; communications (misc.); communicators (process control); counting and timing devices; event recorders: electro optical and infra-red equipment; environment instrumentation and monitoring; geophysical equipment (marine); lasers and ancillary equipment; navigation (marine); oceanography and meteorology detection; radar systems; remote sensing; repair and overhaul services; telegraph equipment; telephone equipment, cable harnesses; sensors.

# SPILSBURY COMMUNICATIONS LTD.

120 East Cordova Street Vancouver, British Columbia, Canada

V6A 1L1

Tel: (604) 684-4131 Telex: 04-55482

Cable: SPILTIN VANCOUVER

**Products:** HF SSB and VHF FM fixed, mobile, and portable radio telephone equipment for land and marine applications; tunable HF whip antennas and antenna tuning units including fully automatic, semi-automatic manual

tuning for land marine and aircraft applications; LF non-directional radio beacons and automatic beacon antennas for airport navigational aids; LF and HF monitor receivers.

### SPRAGUE ELECTRIC OF CANADA LTD.

49 Bertal Road Toronto, Ontario, Canada M6M 4M7

Tel: (416) 766-6123 Telex: 06-969658 TWX: 610 491 6302 Cable: TELEFARAD

Products: solid molded axial leaded tantalum capacitors; axial monolithic capacitors; power factor corrections capacitors.

### STANDBY ELECTRONICS INC.

3111 Woodchester Drive Mississauga, Ontario, Canada L5L 1J2

Tel: (416) 828-6981 Telex: 06960276

Products: standby power supplies; inverters for the cable TV industries; battery chargers for industrial standby power; sinewave inverters for backup

power.

### STATICON LTD.

390 Tapscott Road Scarborough, Ontario, Canada M1B 2Y9

Tel: (416) 291-3723 Telex: 065-25211

Products: ac and dc solid-state no-break (UPS) systems; battery power plants and float charger systems for communications applications; battery eliminators; switchgear battery chargers, all voltages; plating rectifiers including electrophoresis systems, all voltages and ratings; battery chargers for turbine and engine starting, all ratings; static inverters; DC-DC converters, all voltages; frequency converters; magnetron power supplies; solidstate ac voltage regulators; industrial lift truck battery chargers.

### SURFLINE ENGINEERING LTD.

Box 443

Dartmouth, Nova Scotia, Canada **B2Y 3Y5** 

Tel: (902) 463-3550 Telex: 019-21822

**Products:** control system design; control panel and console manufacture; custom instrument design and manufacture.

### SUTHERLAND-SCHULTZ LTD.

859 Courtland Avenue East Kitchener, Ontario, Canada N2G 4H5

Tel: (519) 743-4123

**Products:** industrial control systems; heat-tracing monitors; cement batch panels; programmable control systems.

### SYSTEMHOUSE LTD.

90 Sparks Street Ottawa, Ontario, Canada K1P 6K2

Tel: (613) 234-6544 Telex: 052-4215

**Products:** information systems services; turnkey minicomputer solutions; computerized systems cartographic, hospital and business; energy-management systems; Telidon videotext systems; and social services systems.

Services: information systems, consulting, computer programming, systems and data-base expertise.

### T

### **TD TELEPHONE PRODUCTS** LTD.

195 Nantucket Boulevard Scarborough, Ontario, Canada M1P 2P3

Tel: (416) 757-4166 Telex: 06-96779

Products: Modulus line of electronic telephones with universal pulse dial and last-number memory of DTMF dial, sealed contact switches; duette two-line telephone with hold system; Modulus III full duplex speakerphone; special-purpose electronic telephones.

### TMC (CANADA) LTD.

R.R. 5

Ottawa, Ontario, Canada K1G 3N3

Tel: (613) 521-2050 Telex: 053-4146

Products: RF amplifiers and preamplifiers; antenna couplers; coils; communications equipment and systems; connectors; converters; filters; receivers - LF/VLF, marine, SSB, VHF; coaxial relays and switches; emergency transceivers; RF and IF transformers; transmitters.

### TARGA ELECTRONICS SYSTEMS INC.

P.O. Box 8485, 3101B Hawthorne Road Ottawa, Ontario, Canada K1G 3H9

Tel: (613) 731-9941

Products: magnetic bubblememory data-storage systems; ruggedized bubble-memory cartridges with a range of capacities and user-friendly interfaces for original equipment manufacturers or end users; stand-alone bubblememory data recorders for field, lab or industrial applications; STD bus bubble-memory boards.

### **TAURUS COMPUTERS** PRODUCTS INC.

1755 Woodward Drive Ottawa, Ontario, Canada K2C 0P9

Tel: (613) 226-5361

Products: Taurus-One, a microprocessor-based I/O system; interfaces signal conditioning equipment to computers and consists of two EIA RS232 asynchronous ports, an IEEE-488 GPIB instrument multi-use link port, Taurus-Bus, and input/output modules for digital and analog signals.

### **TAYLOR INSTRUMENT**

75 Tycos Drive Toronto, Ontario, Canada M6B 1W4

Tel: (416) 787-1651 Telex: 06-969754

Products: electronic and pneumatic controllers, indicators, recorders and transmitters; a powerful, fully-integrated control system using the company's MOD control systems.

### TECH 5 LTD.

106 Schneider Road Kanata, Ontario, Canada K2K 1Y2

Tel: (613) 592-3335 Telex: 053-4757

**Products:** electronic assembly: semi-automatic wire wrap, cable

assembly, backpanel assembly, cable harnesses, wire preparation.

### **TECHNICAL ENTERPRISES LTD.**

2266 Drew Road, Unit 9 Mississauga, Ontario, Canada L5S 1B1

Tel: (416) 677-2101 Telex: 06-983639

**Products:** anti-static antenna fittings for aircraft.

### **TECHWEST ENTERPRISES LTD.**

3650 Westbrook Mall Vancouver, British Columbia, Canada V6S 2L2

Tel: (604) 224-1113 Telex: 04-507748 Cable: RESEARCHBC

**Products:** data-acquisition units employing 16mm and 35mm video and optical cameras (e.g. for highway photologging applications); electronic instrument design and manufacture; electrooptical grading, equipment (e.g., apple colour meter).

### TECTROL INC.

39 Kodiak Crescent Downsview, Ontario, Canada M3J 3E5

Tel: (416) 630-8108 Telex: 06-217645

**Products:** switching power supplies; inverters; DC-DC converters; standby power supplies.

### TELECOM POWER CORP.

2779 Lake City Way Burnaby, British Columbia, Canada V5A 2Z8

Tel: (604) 420-3030 Telex: 043-54720

**Products:** communications battery chargers; power plants for telephone and central office and PABX: DC-DC converters; DC-AC inverters; UPS systems; power supplies; battery eliminators and switching regulators.

### TELE-RADIO SYSTEMS LTD.

121 Hanlan Road Woodbridge, Ontario, Canada L4L 3P5 Tel: (416) 851-2231

Tel: (416) 851-2231 TWX: 610-492-2384

**Products:** AM broadcast; AM RF amplifiers, off-air receivers;

telephone instruments: recordercontroller for monitoring of telephone signalling, T1 PCM error generator, T1 cable test set, jumper tracer, delay distortion equalizer; electric power utility products: frequency trend relay, tapchanger controller, partial discharge analyzer, closedifferential voltage relay.

Services: design and manufacture of custom instruments and equipment, including protective relay logic systems for nuclear generating stations and custom control consoles; repair, overhaul and calibration of electrical and electronic instruments, test equipment, meters etc. for science, government and industry; DOT/FCC-type approval engineering services; electrical metrology lab for precise calibration.

### **TELEVOX SYSTEMS INC.**

2115 Lavoisier Street Ste-Foy, Quebec, Canada G1N 4B2

Tel: (418) 687-1100 Telex: 051-31755

**Products:** intercom systems; educational systems — manual and automated; public address systems; intercom amplifiers; amplifiers with stored programs; pre-amplifiers and mixers; intercom duplex amplifiers; private telephone exchange; crossbar switching systems.

### **TENTEK INDUSTRIES**

715 Clayson Road Toronto, Ontario Canada M9M 2H4

Tel: (416) 745-6155

**Products:** residential smoke detectors; intrusion alarms.

# THERMO ELECTRIC (CANADA) LTD.

12 Rutherford Road South Brampton, Ontario, Canada L6W 3J2

Tel: (416) 451-0183 Telex: 06-97664

**Products:** thermocouples, miniature and industrial; RTDs, RTD bridges, thermocouple wire and cable; temperature transmitters, instrument wire and cable; temperature indicators, controllers, recorders, monitors, plugs and jacks, switches.

THOMAS & BETTS LTD.

700 Avenue Thomas Iberville, Quebec, Canada J2X 2M9

Tel: (514) 658-6611 Telex: 05-831550

**Products:** electronic connectors and harnessing accessories, also identification products.

THRUSH INC.

172 Bethridge Road Rexdale, Ontario, Canada M9W 1N3

Tel: (416) 746-4422 Telex: 06-989375

**Products:** direct replacement parts for OEM digital PBX equipment.

TIL-TEK LTD.

P.O. Box 550 Kemptville, Ontario, Canada KOG 1J0 Tel: (613) 258-2470

**Products:** communications band antennas, military band antenna, multicouplers, phased array antennas.

### TOPPING ELECTRONICS LTD.

1320 Ellesmere Road Scarborough, Ontario, Canada M1P 2X9

Tel: (416) 291-7707 Telex: 065-26210

Products: in-house capabilities ranging from microprocessor systems development and fabrication to electronic and communications equipment design, construction, assembly and test; pipeline inspection equipment; tape recorders (analog and multichannel); microcontrollers (including software); voice/data attachments for telephone equipment; microprocessor traffic-signal controllers.

# TORPEY CONTROLS & ENGINEERING LTD.

2220 Midland Avenue, Unit 98 Scarborough, Ontario, Canada M1P 3E6

Tel: (416) 298-7788

**Products:** computer-based systems for television broadcasting.

### TRACON ENGINEERING LTD.

520 Conestoga Road Waterloo, Ontario, Canada N2L 4E2

Tel: (519) 884-2810 Telex: 069-55350

Products: design and manufacturing facilities for custom control and instrumentation systems for electrical, electronic, programmable and pneumatic requirements; dry-type transformers to 1000 KVA and 5 KV; custom metal enclosures and cabinets.

TRAN COMMUNICATIONS LTD.

1320 Shawson Dr.

Mississauga, Ontario, Canada

L4W 1C3

Tel: (416) 678-9504 TWX: 610-4928860 **Products:** Digital data-

communications network products, include a broad line of



a wholly owned Canadian company, has developed the leadership in telecom power conversion technology. With 30 years proven reliability in the telecom industry, new designs in H.F. Switch-Mode and Ferro-Resonant technologies provide a significant contribution in reliability and cost effectiveness.

- Write for new brochure and product summary sheet -

Vancouver: 2779 Lake City Way, Burnaby, B.C. V5A2Z8 CANADA Tel:(604) 420-3030 • Telex: 043-54720 • Twx 610-929-1029

Toronto: 215 Lakeshore Blvd East, Toronto, Ontario M5A3W9 CANADA Tel: (416) 363-5597 • Telex: 065-23471

Chicago: 4050 North Rockwell St., Chicago, Illinois 60618 U.S.A. Tel:(312)463-9181-Twx910-221-5034

### asynchronous and synchronous time-division multiplexers and digital data sets.

### TRANS-AUDIO INDUSTRIES LTD. CORP.

505 Boucherville Street Sherbrooke, Quebec, Canada J1L 1X7

Tel: (819) 563-6162

**Products:** turntables, tone arms.

Tel: (514) 273-0451 Telex: 05-24651

Products: zinc air hearing aid battery; electrochemical timing

**UNICAN SECURITY SYSTEMS** 

5795 De Gaspe Avenue

Montreal, Quebec, Canada

elements.

H2S 2X3

LTD.

### TRIBAR INDUSTRIES

3650 Weston Road Weston, Ontario, Canada M9L 1W/2

Tel: (416) 749-6000 Telex: 065-27167

Products: police traffic radar systems; hand-held model T3 stationary radar, vehicle-mounted DRS-3 stationary radar and vehicle-mounted MDR-1 track radar, for moving and stationary

### TRIONICS COMMUNICATIONS SYSTEMS LTD.

951 Denison Street, Unit 11 Markham, Ontario, Canada

Tel: (416) 475-2233 Telex: 06-966861

Products: rf television equipment, digital programmable displays, satellite receivers.

Services: repair and overhaul of high-technology test equipment.

### TRIPLE CROWN ELECTRONICS INC.

42 Racine Road Rexdale, Ontario, Canada M9W/ 2Z3

Tel: (416) 629-1111

**Products:** satellite earth receiving stations, processors and modulators for cable tv, line and distribution amplifiers, indoor apartment amplifiers.

### TYCOR ELECTRONIC PRODUCTS LTD.

6115 - 3rd Street Southeast Calgary, Alberta, Canada T2H 2L2

Tel: (403) 259-3200 Telex: 03-825842

Products: AC power-line filter.

### UNI-TEL LTD.

1792 Birchmount Road Scarborough, Ontario, Canada M1P 2H7

Tel: (416) 291-3131 Telex: 06-963523

**Products:** equipment and systems for supervisory control, remote control, fault-alarm reporting, tele-metering and data transmission, for such customers as telephone operating companies, pipelines, power generating and distributing utilities, municipal utilities, railroads, radio and television broadcasters, and industrial and manufacturing companies.

### UNITRON INDUSTRIES LTD.

685 Wabanaki Drive P.O. Box 9017

Kitchener, Ontario, Canada

N2G 4J3

Tel: (519) 893-6800 Telex: 069-5209

Products: a complete line of hearing aids including: high power, directional, HLC (high level compression), high frequency emphasis, peak clipping, diode clipping, linear models, frequency dependent compression, low frequency emphasis, and push/pull.

### UNIVERSAL TECHNOLOGY INC.

1685 Ingleton Avenue Burnaby, British Columbia, Canada V5C 4L8

Tel: (604) 299-8414

**Products:** radio remote controls for forestry, barges, trains, mining operations etc.

# Canada in the world of electronics

### **UP-RIGHT SCAFFOLDS LTD.**

108 Industrial Drive Whitby, Ontario, Canada L1N 5Z8

Tel: (416) 261-7905 Telex: 06-981395

**Products:** portable aluminum microwave path-loss test towers with optional antenna dollies; installers' scaffolds.

### URTEC LTD.

129 Telson Road, Markham, Ontario, Canada L3R 1E4

Tel: (416) 475-0660 Telex: 06-986677

**Products:** portable gamma ray scintillometers and spectrometers; airborne geophysical exploration systems for helicopters and fixed wing aircraft.

### V

### VALCOM LTD.

P.O. Box 603 Guelph, Ontario, Canada N1H 6L3

Tel: (519) 824-3220 Telex: 069-56593

**Products:** fibreglass whip antennas, free standing 35 ft. to 80 ft. (10.7 m to 24.4 m) 2 to 30 MHz both military and commercial versions; auto tune couplers, 1kW to 10 kW; power supplies, cable assemblies, amplifiers, antennas, splitter panels, electronic assembly work.

# VARIAN ASSOCIATES OF CANADA LTD.

45 River Drive Georgetown, Ontario, Canada L7G 2J4

Tel: (416) 457-4130 Telex: 069-7502 TWX: 610-492-2641

**Products:** microwave tubes — millimeter wave fubes up to 220 GHz, klystrons, travelling wave tubes, magnetrons; power supplies — travelling wave tubes and klystrons; magnetometers — cesium and proton, portable, airborne, and underwater; Klystron power amplifiers.

**VERTICAL DATA SYSTEMS INC.** 1215 Meyerside Drive, Unit 2A Mississauga, Ontario, Canada

L5T 1H3

Tel: (416) 671-1752 Telex: 06-968905

**Products:** converters for Olivetti typewriters that transform a typewriter to a printer without affecting normal typewriting functions.

### **VESTSHELL INC.**

10351 Pelletier Avenue Montreal North, Quebec, Canada H1H 3R2

Tel: (514) 326-1280 Telex: 05-829586

**Products:** precision investment casting of ferrous alloys; silicon iron; monel; cobalt alloys; soft magnets.

### VISCOUNT INDUSTRIES LTD.

105 East 69 Avenue Vancouver, British Columbia, Canada V5X 2W9

Tel: (604) 327-9446 Telex: 04-508605

**Products:** television systems, studio equipment and special-effects generators.

### **VOLKER-CRAIG LTD.**

(See Nabu Commercial Terminals)

### W

### WR COMMUNICATIONS LTD.

1655 West 3rd Avenue Vancouver, British Columbia, Canada V6J 4V7

Tel: (604) 732-3342 Telex: 04-54542

**Products:** VHF and UHF mobiles, base stations, remote controls, repeaters and paging systems.

# WARD AUTOMOTIVE ELECTRONICS OF CANADA LTD.

188 Bentworth Avenue Toronto, Ontario, Canada M6A 1P8

Tel: (416) 789-1167 TWX: 610-491-0462

Products: vehicular antennas.

### WARD-BECK SYSTEMS LTD.

841 Progress Avenue, Scarborough, Ontario, Canada M1H 2X4

Tel: (416) 438-6550 Telex: 065-25399

**Products:** Audio and TV broadcast consoles and associated equipment.

quipment.

### WEBER ELECTRONICS

105 Brisbane Road Downsview, Ontario, Canada M3J 2K6

Tel: (416) 663-5670 TWX: 610-492-1337

**Products:** printed-circuit cardedged connectors.

### WELLSDALE RESEARCH LTD.

5508 - 142A Avenue, Edmonton, Alberta, Canada T5A 1J8

Tel: (403) 459-0380

**Products:** remote weather stations, suitable for radios or

satellite data link.

### WELTRONIC COMPANY

P.O. Box 1088 Windsor, Ontario, Canada N9A 6P4

Tel: (519) 966-0230

**Products:** resistance welding electronic controls; solid-state and microprocessor.

### WESTECH SYSTEMS LTD.

12852-141 Street Edmonton, Alberta, Canada T5L 4N8

Tel: (403) 452-8450

**Products:** automatic, mediumcapacity mobile telephone systems.

# WESTERN RESEARCH & DEVELOPMENT LTD.

1313 - 44th Avenue Northeast Calgary, Alberta, Canada T2F 6L5

Tel: (403) 276-8806 Telex: 038-24684

**Products:** pollution monitoring equipment, source and ambient; continuous stack emission

monitoring systems — SO<sub>2</sub>NO<sub>x</sub>, O<sub>2</sub> and particulates; H<sub>2</sub>S analyzers; ambient monitoring systems and data handling packages; sulphur plant process measurement and control systems; sales gas H<sub>2</sub>S analyzer (fast response UV photometric analyzer); and total reduced sulphur, dual-flame photometric analyzer system for kraft pulp and paper industry.

### WESTERN SCALE CO. LTD.

1670 Kingsway Avenue Port Coquitlam, British Columbia, Canada V3C 3Y9

Tel: (604) 941-3474

**Products:** digital weight indicators; microprocessor control systems; rate feeders; data-

recording devices.

### WESTINGHOUSE CANADA INC.

P.O. Box 5009

Burlington, Ontario, Canada

L7R 4B3

Tel: (416) 528-8811 Telex: 061-8409

Cable: WESTCAN HAMILTON

**Products:** computer terminals and display systems for video presentation of digital information; communications controllers for polling, message switching and control in digital networks; line tracing systems for automatic contour control of gas and plasma cutting and other machine tool applications; electrohydraulic, pneumatic and electronic industrial instrumentation devices and integrated systems using such components for the measuring, recording and controlling of industrial systems; semi-conductor bridge assemblies; nuclear protection and monitoring systems; sonar and other forms of underwater sound detection and weapon control systems; airborne and surface electronic data gathering and weapon control systems; electronic manufacturing and engineering subcontract

### WESTRONIC SYSTEMS LTD.

services.

7 West 7th Avenue Vancouver, British Columbia, Canada V5Y 1L4

Tel: (604) 872-8581

**Products:** microprocessor-based SCADA systems and remote terminal units; alarm and annunciator systems; FSK tone modems; sequence of events recorders.

### WILLOWGLEN SYSTEMS LTD.

1235 - 64 Avenue Southeast Calgary, Alberta, Canada T2H 2J7

Tel: (403) 253-3051 Telex: 03825630

**Products:** VASCON-200 data acquisition and supervisory control system; VASCON-220 process controller computer based

4 mode process controller.

# THE WIND TURBINE CO. OF CANADA LTD.

21 Howard Avenue Elmira, Ontario, Canada N3B 2C9

Tel: (519) 669-5421

Telex: 069-55282 **Products:** wind-driven

generators; microwave and highfrequency antennas; broadcasting towers and transmission lines.

# WYNCHESTER SYSTEMS AND ELECTRONICS INC.

5 Penn Drive Weston, Ontario, Canada M9L 2A6

Tel: (416) 745-6455 Telex: 06-986766

Products: 8 and 16-bit small-business computers utilizing the S-100 bus design, which run the CP/M or CP/M-86 operating systems; equipment comes packaged with diskette drives; options include hard disks, letterquality or dot-matrix printers, etc.



### YORKVILLE SOUND LTD.

80 Midwest Road Scarborough, Ontario, Canada M1P 4R2

Tel: (416) 751-8481 Telex: 06-96371

**Products:** musical-instrument

amplifiers, sound-reinforcement systems, amplifiers, speakers and accessories.

Z

#### **ZBK TELECOMPUTERS**

8110 Trans-Canada Highway South

St. Laurent, Quebec, Canada H4S 1M5

Tel: (514) 331-9102 Telex: 05-825558

Products: model 7500 universal terminal controller; VVSET; Telex control unit; multiplexer packet assembler disassembler X.25; word processors (disc, hard, cartridge, pack etc.); microcomputers; controllers and processors (BDU non-intelligent, BDU intelligent may have, and BDU cluster multi-station peripherals); communications network front end processing software; and data communications equipment (selectors, code converters, storage, and buffers).

#### **ZVOOK CORPORATION**

8 King Street East, Suite 205 Toronto, Ontario, Canada M5C 1B5

Tel: (416) 368-2723

**Products:** computer-assisted learning (CAL) system featuring text-to-voice capability; microprocessor-based portable handheld device reads specially prepared printed text and enunciates textual content; text is man and machine readable; system applicable to wide variety of educational/instructional tasks including language, vocational, professional and management training, academic subjects, etc.; well suited for self-study; voice capability easily added to existing printed learning materials.

#### **CONSULTANTS**

#### A

#### **ADGA GROUP**

116 Albert Street, Suite 400 Ottawa, Ontario, Canada K1P 5G3

Tel: (613) 237-3022

Telex: 053-4563 Cable: ADGA OTT

Services: engineers and systems

analysts.

# ALTERNATIVE THREE SYSTEMS LTD.

202 Sheppard Avenue West Willowdale, Ontario, Canada M2N 1N1

Tel: (416) 222-4906

**Services:** complete systems consulting services from specification to implementation.

В

#### BARRINGER RESEARCH LTD.

304 Carlingview Drive Metropolitan Toronto Rexdale, Ontario, Canada M9W 5G2

Tel: (416) 675-3870 Telex: 06-989183

Cable: BARSEARCH TORONTO

**Services:** program participation and management; consulting and contracting; laboratory analyses; ground and airborne pollution

monitoring.

#### BELL CANADA-INTERNATIONAL MANAGEMENT, RESEARCH AND CONSULTING LTD.

1 Nicholas Street, 8th Floor Ottawa, Ontario, Canada K1G 3J4

Tel: (613) 563-1811

than 40 countries.

Telex: 053-4849

Services: expertise in all facets of telecommunications on consulting or turnkey basis; forecasting, planning and studies; management, construction and turnkey operation; engineering, furnishing and installation; operations and maintenance; training; computer communications; staff has worked in more

**BRISTOL AEROSPACE LTD.** 

P.O. Box 874

Winnipeg, Manitoba, Canada

R3C 2S4

Tel: (204) 775-8331 Telex: 07-57774 TWX: 610-671-3598 Cable: BRISAIRCO

Services: data acquisition studies in the fields of pollution, meteorology, hydrology, oceanography and machine diagnostics; various methods of data acquisition are studied and recommendations are made, and design, fabrication, and installation of complete systems can be provided; complete engineering services for sounding rocket payloads from feasibility studies to instrument development and test flight.

C

# CABLE CONSULTING SERVICES LTD.

R.R. 1

Terra Cotta, Ontario, Canada

LOP 1 NO

Tel: (416) B38-2317

**Services:** management and engineering consulting services for all aspects of cable television distribution systems, including feasibility studies, cost projections and enginering design; design of microwave systems and interference studies for satellite earth stations.

## CANADA SYSTEMS GROUP LTD.

1736 Courtwood Crescent Ottawa, Ontario, Canada K2C 2B5

Tel: (613) 225-1171 Telex: 053-3661

**Services:** software and systems engineering in the field of computer systems and applications; methods analysis and management engineering; particular applications: air-traffic-control simulation, Telex switching, vehicle dispatch.

# CANADIAN ASTRONAUTICS LIMITED

Suite 201, 1024 Morrison Drive,

Ottawa, Ontario, Canada K2H 8K7

Tel: (613) 820-8280

Services: satellite system design

studies.

#### CANADIAN PACIFIC CONSULTING SERVICES LTD.

740 Notre Dame Street West,

Suite 760.

Montreal, Quebec, Canada

H3C 3X6

Tel: (514) 395-7799 Telex: 055-60147

Cable: CANPAC MONTREAL

Services: consulting specialists in planning, system engineering, construction, operation and administration of general telecommunication services; broad spectrum of services also available in respect to computer communication systems and railway signalling and communication systems.

#### CANSULT LTD.

275 Duncan Mill Road Toronto, Ontario, Canada M3B 3H9

Tel: (416) 445-9431 Telex: 06-966783

Cable: CANSULT TORONTO

Services: specializing in such fields as power transmission and communication, power stations, electrical installations, industrial utilities, airports and air transport, townsite master planning; town-

site infrastructure.

#### DAVID E. CLOSE

mobile, satellite, data

Management Consultant 22 Edgewood, Route 3, Bath, Ontario, Canada K0H 1G0

FM, TV and CATV), microwave,

communications and telephony.

Tel: (613) 389-7601

Services: consulting management in the productive application of CAD/CAM and interactive computer graphics technology. Services include investigation and preparations for bringing CAD/CAM into the engineering and manufacturing organization, its implementation and management.

#### **COLE, SHERMAN &** ASSOCIATES LTD.

2025 Sheppard Avenue East Willowdale, Ontario, Canada M2J 1W3

Tel: (416) 491-4503 Telex: 06-966647 Cable: CSAINC, TOR

**Services:** postal engineering.

#### **CUSHING & NEVELL TECHNICAL & COMMERCIAL PUBLICATIONS LTD.**

120 Eglinton Avenue East Toronto, Ontario, Canada

M4P 1E2

Tel: (416) 487-2866

Services: electronic technical advertising and technical writing, with language capability.

#### D

#### CANTEL ENGINEERING ASSOCIATES LTD.

402 West Pender Street Vancouver, British Columbia. Canada V6B 1T6

Tel: (604) 684-1144 Telex: 04-507775 Cable: CANTELCOM

Services: feasibility studies, field surveys, design and specification, tender evaluation, project management, briefs to government authorities, inspection and training, with the following specialization: broadcasting (AM,

#### DGB CONSULTANTS INC.

P.O. Box 40 Desjardins Postal Station Montreal, Quebec, Canada H5B 1B2 Tel: (514) 282-9531

Telex: 055-61718

Services: professional services in the telecommunication and computer fields; feasibility studies, systems concept and design, preparation of plans and specifications, analysis of bids from suppliers; project management, training of personnel and commissioning.

DIGHEM LTD.

Suite 7010, P.O. Box 178 1 First Canadian Place Toronto, Ontario, Canada M5X 1C7

Tel: (416) 862-7568 Telex: 06-219566

**Services:** helicopter-borne geophysical surveys; interpretation of geophysical data.

#### **DIGITECH SYSTEMS**

500, 441 - 5th Avenue South West Calgary, Alberta, Canada T2P 2V1

Tel: (403) 265-3484

Services: digital processing of land and marine geophysical survey data for the petroleum exploration industry; seismic processing and software systems; geophysical modelling and software systems; gravity and magnetic processing; custom geological file development; custom geophysical file development; digitizing services and software systems; mapping services and software systems.

#### DYNAMIC SYSTEMS GROUP

405 - 805 8 Avenue Southwest Calgary, Alberta, Canada T2P 1H7

Tel: (403) 264-1216

**Services:** real-time microcomputer control systems design, consulting and programming services.

#### E

#### THE ECE GROUP

205 Lesmill Road Don Mills, Ontario, Canada M3B 2V1

Tel: (416) 449-1030 Telex: 06986141

Services: feasibility studies; design and specification of electronic communications and control systems; installation management; reports; negotiations with utilities; microprocessor applications — both hardware and software; tender evaluations; inspection; environmental and energy management.

#### G

#### GEOPHYSICAL SURVEYS INC.

2272 Leon Hamel

Quebec City, Quebec, Canada G1N 4L2

Tel: (418) 687-4055

Telex: 051-31523 Cable: GEOAIR

Services: ground and airborne

geophysical surveys.

#### GEOTERREX LTD.

2060 Walkley Road Ottawa, Ontario, Canada K1G 3P5

Tel: (613) 731-9571 Telex: 053-3502 Cable: GEOTERRA

Services: airborne geophysical exploration: high-sensitivity aeromagnetics, high-sensitivity radiometrics, Barringer-input airborne electomagnetic; ground geophysical exploration follow-up of airborne electromagnetic surveys; magnetic, electromagnetic, induced polarization, resistivity, gravity and seismic surveys; marine geophysics: bathymetry.

# J.D. GORRIE & ASSOCIATES LTD.

136 Bedford Park Avenue Toronto, Ontario, Canada M5M 1J1

Tel: (416) 484-8396

Services: software and computer systems consultants, with specialists in real-time control systems, energy-management systems, microcomputer applications, custom turnkey business systems, local area networks and compilers; provision of development services, management and technical consulting and personnel for staff augmentation; clients range from multinationals to small businesses.

#### Н

#### HN ENGINEERING INC.

4664 Lougheed Highway Burnaby, British Columbia, Canada V5C 5R7

Tel: (604) 294-3401 Telex: 043-54623 Cable: HN ENG VCR

**Services:** systems engineers with expertise in telecommunications transmission systems (microwave, troposcatter, radar, satellite, UHF, VHF, HF, MF, powerline carrier, VF cable, fibre optics); telephony systems (CO and PABX equipment, private networks, outside plant, station equipment, traffic and tariff studies); data/control systems (datacom facilities, computer hardware, applications software, SCADA systems); broadcasting stations (AM and FM radio, television, cable TV, closed-circuit TV, TVRO earth stations); range of services offered includes project management; system evaluations, feasibility studies, short and longterm system planning; preparation of applications for licensing authorities; conceptual and detailed system design; preparation of specifications for tender purposes; evaluation of tenders and assistance in contract negotiation; supervision of construction, including factory and field testing; implementation and operations assistance.

## WILLIAM G. HUTCHISON & CO. LTD.

2025 Sheppard Avenue East Willowdale, Ontario, Canada M2J 1V7

Tel: (416) 498-5344 Telex: 06-966710

**Services:** computer consulting —

high technology.

#### **INFOMART**

164 Merton Street Toronto, Ontario, Canada M4S 3A8

Tel: (416) 489-6640 Telex: 06-221111

**Services:** database search services and videotex services and systems for the information user.

# INTERA ENVIRONMENTAL CONSULTANTS LTD.

400-7015 Macleod Trail Calgary, Alberta, Canada Tel: (403) 253-8895

Telex: 03-824537

Services: groundwater-contamination and air-quality engineering and consulting

#### INTERNATIONAL AERADIO (NORTH AMERICAN) LTD.

70 Don Park Road, Unit 15 Markham, Ontario, Canada L3R 1G4

Tel: (416) 475-1144 Telex: 06-986818

Services: handling turnkey contracts in the two-way manned mobile-radio field; provision of a computer-aided dispatch system for transit operations.

#### Κ

#### KENDALL ASSOCIATES LTD.

77 Metcalfe Street, Suite 406 Ottawa, Ontario, Canada

K1P 5L6

Tel: (613) 236-0875 Telex: 053-3560 Cable: KENMARK

Services: marketing consultants specializing in surveys and studies for clients interested in North American defence or technical markets; provision of temporary technical personnel in electronics, aerospace and computer technology.

#### **KENTING EARTH SCIENCES** LTD.

380 Hunt Club Road Ottawa, Ontario, Canada K1G 3N3

Tel: (613) 521-1630 Telex: 053-4173 Cable: KENSCI

Services: aerial photography; remote sensing; airborne geophysics; airborne profile recording; interpretation of imagery; interpretation of geophysical data; surveying and mapping; geodetic surveys.

#### M

#### MACLAREN ENGINEERS INC.

33 Yonge Street Toronto, Ontario, Canada M5E 1E7

Tel: (416) 365-7337 Telex: 06-23765 Cable: JAYMAC

Services: environment assessment, control and monitoring; instrumentation and control

design.

#### MILLER COMMUNICATIONS SYSTEMS LTD.

300 Legget Drive Kanata North Business Park Kanata, Ontario, Canada **K2K 1Y5** 

Tel: (613) 592-3020 Telex: 053-4164

**Services:** operates principally in the area of systems engineering, specializing in satellite communications systems planning; the company has the capability to design, construct, and install communications facilities of a highly customized nature in a short time frame.

# MONTREAL ENGINEERING CO.

P.O. Box 6088, Station A 2045 Stanley Street Montreal, Quebec, Canada H3C 3Z8

Tel: (514) 286-3636 Telex: 055-60735 Cable: MONENCO

Services: consulting engineering services in communications and supervisory control systems for power generating plants, electric power transmission networks (including high voltage DC), pipelines, pumping stations and

industrial plants.

#### MOSAID INCORPORATED

P.O. Box 13579 Kanata, Ontario, Canada K2K 1X6

Tel: (613) 836-3134 Telex: 053-4986

**Services:** specializes in the design and design analysis of MOS memory chips; is equipped for state-of-the-art circuit and layout design of devices such as VLSI dynamic RAMs; on-site work is undertaken to see designs into production and the company works with a U.S. processing

house to prove-in designs before transfer if required; undertakes the analysis of commercially available memory devices and has available reports describing the circuit design and operation of virtually every MOS dynamic RAM and some static devices; design seminars are given using this data base; operates worldwide with major users and suppliers of memory devices in three continents; also supplies a unique MOS circuit analysis computer-aided design program that can be used for the most demanding MOS design work.

#### Ν

#### NATIONAL ELECTROLAB LTD.

1536 Columbia Street North Vancouver, British Columbia, Canada V7J 1A4

Tel: (604) 985-0511 Telex: 043-52683

6 Lansing Square, Suite 118A Willowdale, Ontario, Canada

M2J 1T5

Tel: (416) 496-1130 P.O. Box 9123, Station E Edmonton, Alberta, Canada T5P 4K2

Tel: (403) 454-8130

Services: consulting electronics laboratory; testing of communications equipment for type approval by the Canadian Department of Communications; testing and evaluation for purchasing and insurance purposes; custom instrumentation design and development.

#### NORTHWAY-GESTALT CORP.

1450 O'Connor Drive Toronto, Ontario, Canada M4B 2V2

Tel: (416) 755-1141 Telex: 06-963518

Cable: NORTHWAY TORONTO

**Services:** aerial mapping, also orthophotomosaics, digitizing, digital elevation models.

#### 0

# ONTARIO RESEARCH FOUNDATION

Sheridan Park Research

Community Mississauga, Ontario, Canada L5K 1B3

Tel: (416) 822-4111 Telex: 06-982311

Services: contract research and development, design, and construction of special devices and instrumentation; data acquisition and analysis; monitoring of solar-heating systems; thin-film vacuum coating capability; custom microprocessor applications; measuring and evaluation of fibre optic cables and components; structural dynamic analyses using computerized equipment; spectroanalyzer, electromagnetic and hydraulic vibration excitation studies.

## ONTEL COMMUNICATIONS INC.

95 Barber Greene Road, Suite 112 Don Mills, Ontario, Canada M3C 3E9

Tel: (416) 446-5435 Telex: 06-966802

Services: comprehensive engineering and management services in planning, design and implementation of broadcasting and telecommunications undertakings. Studio and transmitter systems design; coverage area determination; RF propagation analyses; frequency searching, planning and co-ordination; design of new buildings and towers; investigation and analysis of existing structures; capital budget and schedule definition and control; purchasing, subcontract administration; installation, site supervision, acceptance testing; feasibility studies.

#### P

# PEAT, MARWICK AND PARTNERS

P.O. Box 31

Commerce Court West Toronto, Ontario, Canada M5L 1B2

Tel: (416) 863-3500

Telex: 06217692

**Services:** business data processing, management information systems, urban traffic control, marine traffic control, air traffic control, medical electronics,

special-purpose electronic system design, process control; feasibility studies, systems evaluations, equipment evaluations and tests, system design, development and specifications, computer programming, system implementation.

#### PHOTOSUR INC.

1130 Sherbrooke Street West Montreal, Quebec, Canada H3A 2R5

Tel: (514) 288-1370 Telex: 055-61257

**Services:** aerial photography; remote sensing; airborne geophysics; interpretation of imagery; interpretation of geophysical data; surveying and mapping; CAD/CAM.

#### Q

#### QUESTOR SURVEYS LTD.

6380 Viscount Road Mississauga, Ontario, Canada L4V 1H3

Tel: (416) 676-9880 Telex: 06-983611

**Services:** geophysical exploration — aeromagnetic: combined aeromagnetic/airborne electromagnetic; airborne radiometric; helicopter aeromagnetic/electromagnetic; airborne high-sensitivity magnetic gradiometer.

#### S

#### SEIMAC LIMITED

1600 Bedford Highway Bedford, Nova Scotia, Canada B4A 2X2

Tel: (902) 835-9686 Telex: 019-22888

**Products:** consulting and design services in the applications of electronics and data acquisition and processing to marine applications; fishing, transport, oceanography; custom manufacture and service.

# SHARON PROFESSIONAL SERVICES

215 Cooper Street Ottawa, Ontario, Canada K2P 0G2

Tel: (613) 238-7395

Services: electronics design and

engineering; engineering consulting — electronics, mechanical, aerospace; technical writing.

# SHARP SPECIAL SYSTEMS DIVISION

2 First Canadian Place, Suite 1900 Toronto, Ontario, Canada M5X 1E3

Tel: (416) 364-5361

**Services:** expertise in mini and micro computer systems; systems converting; contract programming; complete turnkey systems; feasibility studies and systems specification.

Cable: GEOTERRA

Series: photogrammetry, geodetic surveys, engineering surveys and resource studies: stereo plotting, airborne and ground electronic distance measuring, route location; airborne geophysical exploration: high-sensitivity aeromagnetics, high-sensitivity radiometrics, Barringer-input airborne electromagnetic; ground geophysical exploration: followup of airborne electromagnetic surveys; magnetic, electromagnetic, induced polarization, resistivity, gravity, and seismic surveys; marine geophysics.

# Canada in the world of electronics

#### T

# TEKNICA RESOURCE DEVELOPMENT LTD.

633-6th Avenue Southwest, Suite 600 Calgary, Alberta, Canada T2P 2Y5

Tel: (403) 269-4386 Telex: 038-26725

Services: software for generation of synthetic borehole sonic logs; termed seislogs, from conventional broadband seismic data; specialized interpretation services for determination of subsurface lithologies and porosities using data from derived logs.

#### **\X**/

# WATTS, GRIFFIS & McOUAT LTD.

159 Bay Street, Suite 911 Toronto, Ontario, Canada M5J 1J7

Tel: (416) 364-6244 Telex: 06-217620 Cable: WATGRIF

**Services:** international data gathering, interpretation, and report compilation — ground geophysics and geochemistry; electromagnetic, gravimetric, and radiometric surveys; induced polarization studies; also interpretation of airborne geophysical data, water-quality analyses, and environmental data assessment.

#### TELERADIO SYSTEMS LTD.

121 Hanlan Road Woodbridge, Ontario, Canada L4L 3P5

Tel: (416) 851-2231 TWX: 610-492-2384

Services: consulting electronics laboratory; testing of communications equipment for type approval by the Canadian Department of Communications; testing and evaluation for purchasing and insurance purposes; custom instrumentation design and development.

#### TERRA SURVEYS LTD.

2060 Walkley Road Ottawa, Ontario, Canada K1G 3P5 Tel: (613) 731-9571

Tel: (613) /31-95/ Telex: 053-3502

# WESTERN GEOPHYSICAL CO. OF CANADA LTD.

2612 37th Avenue Northeast P.O. Box 5250, Station "A" Calgary, Alberta, Canada T2H 1X6

Tel: (413) 280-8100 Telex: 038-21602

Services: high-resolution landseismic exploration; land-seismic exploration, dynamite or Vibroseis®; geothermal exploration; marine seismic exploration, aquapulse, dynamite (maxipulse) or airgun; aerial photography; airborne geophysical surveys including aeromagnetic, sidelooking airborne radar (SLAR), gamma-ray spectrometry, verylow-frequency electromagnetic; utility mapping. Full data processing and interpretation services.

# DISPLAYS

SPECIALISTS IN
HIGH PERFORMANCE L.C.D.'S

8.8:8.8:9.9



#### **APPLICATIONS:**

- INSTRUMENTATION
- TELECOMMUNICATIONS
- OFFICE
- INDUSTRIAL
- AVIONICS
- SCIENTIFIC
- · MARINE
- MILITARY

#### FEATURES:

- HIGH CONTRAST
- LOW POWER CONSUMPTION
- COMPACT
- µ PROCESSOR INTERFACE
- FLEXIBLE CONFIGURATIONS
- HIGH RELIABILITY
- -40°C TO +85°C OPERATION
- EXCELLENT READABILITY

STANDARD DISPLAYS ARE AVAILABLE IN NUMERIC, ALPHA-NUMERIC AND DOT MATRIX FORMATS.

CUSTOM DISPLAYS ARE DESIGNED & MANUFACTURED TO MEET USER SPEC'S.

STANDARD AND CUSTOM DISPLAYS
MAY BE DESIGNED FOR DIRECT DRIVE OR
MULTIPLEX MODES AND ARE AVAILABLE
IN VARIOUS COLOURS.

FOR FURTHER INFORMATION CONTACT:



1283 Algoma Road Ottawa, Ontario, Canada K1B 3W7 (613) 744-3773 TELEX 053-4885

# Data Recording You Can Depend On

Aircraft • Marine • Vehicle Field • Factory • Process Plant

Targa builds ruggedized data and program storage equipment using Bubble Memory for dependability — Every time!

No more data loss due to recorder or disk malfunction. No more expensive down time. No more data errors.

Stand-alone subsystems or "bare-bones" subassemblies. Fixed or removable cartridge media. Wide range of interfaces, packaging configurations and simple, software commands for "drop-in" convenience.

Custom systems engineered to your requirements.





TARGA ELECTRONICS SYSTEMS INC. P.O. Box 8485 3101B Hawthorne Road Ottawa, Canada K1G 3H9 (613) 731-9941

# **Cross Index**

#### **EQUIPMENT**

#### **AEROSPACE EQUIPMENT**

CAE Electronics Ltd. Com Dev Ltd. Electrovert Ltd. Garrett Manufacturing Ltd. Goodwood Data Systems Interimco Technosystems Leigh Instruments Ltd. Lenbrook Industries Ltd. Litton Systems Canada Ltd. Motorola Canada Ltd. Nautical Electronic Laboratories Ltd. Presentey Engineering Products Ltd. Rockwell International of Canada Ltd. SED Systems Inc. Spar Aerospace Ltd. Tracon Engineering Ltd. **Trionics Communications** Systems Ltd.

#### **AIRCRAFT INSTRUMENTS**

Aviation Electric Ltd. Canadian Marconi Co. Garrett Manufacturing Ltd. K.B. Electronics Ltd. Leigh Instruments Ltd. Litton Systems Canada Ltd. Presentey Engineering Products Ltd. Rockwell International of Canada Ltd.

#### **AMPLIFIERS**

Bayly Engineering Ltd. Beckman Instruments Inc. Bryston Manufacturing Co. Califone Industries Ltd. Comad Communications Delta-Benco-Cascade Ltd. EKEG Electronics Co. Ltd. Electro Vox Industries Inc. Epitek Electronics Ltd. Lindsay Specialty Products Ltd. MA Electronics Ltd. Multi-Vox Ltd. National Electrolab Ltd. P.G. Electronics Quindar Products Ltd. Richmond Sound Design Ltd. Sperry Inc. TMC (Canada) Ltd. Tele-Radio Systems Ltd. Televox Systems Inc. **Trionics Communications** Systems Ltd. Triple Crown Electronics Valcom Ltd.

Varian Associates of Canada Ltd. Yorkville Sound Ltd.

#### **ANTENNAS**

Abroyd Construction Amphenol Canada Inc. Andrew Antenna Co. Ltd. Antech Antenna Technologies Ltd. Canadian Astronautics Ltd. Canadian Larsen Electronics Ltd. Collben Mfg. Co. Elinca Communications Ltd. Geleco Electronics Ltd. Hermes Electronics Ltd. Larcan Communications Equipment Ltd. Lindsay Specialty Products Ltd. M.S.C. Electronics Ltd. Motorola Canada Ltd. Polestar Antenna Co. Ltd. Sinclair Radio Laboratories Ltd. Spilsbury Communications Ltd. Til-Tek Ltd. Trionics Communication Systems Ltd. Valcom Ltd. Ward Automotive Electronics of Canada The Wind Turbine Co. of Canada Ltd.

#### **ANNUNCIATOR SYSTEMS**

Automatec Inc. Baron Communications Ltd. Bristol of Canada Chubb Security Systems Edwards International Electric Power Equipment Ltd. Lloyd Controls Ltd. Mechtronics Research Corp. Positron Industries Inc. Rochester Instrument Systems Ltd. Tentek Industries Westronic Systems Ltd.

#### **AVIONICS**

CAE Electronics Ltd. Canadian Marconi Co. Computing Devices Co. Dighem Ltd. Leigh Instruments Ltd. Litton Systems Canada Ltd. MacDonald Dettwiler & Associates Optotek Ltd. Philips Electronics Ltd. Presentey Engineering Products Ltd. Racal (Canada) Ltd. Raytheon Canada Ltd. Rockwell International of Canada Ltd.

Simtron Limited Sperry Inc. Technical Enterprises Ltd.

#### **BROADCASTING**

Central Dynamics Ltd. Century III Electronics Inc. Comad Communications Ltd. Commercial Electronics Ltd. Consultronics Ltd. Electrohome Electronics Elinca Communications Ltd. Geleco Electronics Ltd. Leitch Video Ltd. MPB Technologies Inc. M.S.C. Electronics Ltd. McCurdy Radio Industries Ltd. Nautical Electronic Laboratories Ltd. Presentey Engineering Products Ltd. Richmond Sound Design Skotel Corp. Torpey Controls & Engineering Trans-Audio Industries Ltd. Corp. Trionics Communications Systems Ltd. Uni-Tel Ltd.

#### **COMMUNICATIONS**

Ward-Beck Systems Ltd.

Audor Communications Inc. Auto Vox Inc. Bell Canada International Blue Chip Software Inc. Cableshare Inc. Calgary Controls Ltd. Canada Systems Group Canadian Astronautics Ltd. Canadian General Electric Co. Ltd. Canadian Marconi Co. Canstar Communications Century III Communications Com Dev Ltd. Consultronics Ltd. Daniels Electronics Ltd. Develcon Electronics Ltd. The Dictograph Corp. ESE Ltd. Electrohome Electronics Elinca Communications Ltd. Executone Ltd. Farinon Canada Ltd. Ferritronics Ltd. Gandalf Data Ltd. Garrett Manufacturing Ltd. General Data Comm. Industries (Canada) Ltd. Glenayre Electronics Ltd. ITT Communications Interimco Technosystems Inc. International Systems Ltd. KB Electronics Ltd. Leblanc & Royle Communications Inc.

Ltd. Lenbrook Industries Ltd. Lynch-Transcom Inc. MA Electronics Canada Ltd. MDI Mobile Data International Inc. M.S.C. Electronics Ltd. MacDonald Detwiller & Associates Ltd. Memotec Microdesign Ltd. Miller Communications Systems Ltd. Motorola Canada Ltd. Muirhead Systems Ltd. Northern Telecom Ltd. Perle Systems Ltd. Polestar Communications Ltd. Presentey Engineering Products Ltd. Pylon Electronic Development Co. Ltd. Pylon Electronics Ltd. Quindar Products Ltd. RMS Industrial Controls Inc. Racal (Canada) Ltd. Raytheon Canada Ltd. Richmond Sound Design Rockwell International of Canada Ltd. SED Systems Inc. SR Telecom Inc. Simtron Limited Spar Aerospace Ltd. Sperry Marine Systems Spilsbury Communications TD Telephone Products Ltd. Topping Electronics Ltd. Trans Communications Ltd. Trionics Communications Systems Ltd. Uni-Tel Ltd. Vertical Data Systems Inc. WR Communications Ltd. Westronic Systems Ltd.

Leecraft Industries Ltd.

Leigh Instruments Ltd.

Leigh Navigation Systems

# COMPUTERS AND PERIPHERALS

Xicom Technologies Corp.

Ahern & Soper Ltd. Baradine Products Ltd. Burroughs Inc. Cabco Research Ltd. Cableshare Inc. Canada Systems Group Ltd. Canadian Astronautics Century III Electronics Inc. Chion Corp. Circuit Design Corp. Comptec International Computing Devices Co. Comterm Inc. Conspec Controls Ltd. Control Data Canada Ltd. Cybernex Ltd.

Canada Dynalogic Info-tech Corp. Dy-4 Systems Inc. EKEG Electronics Co. Ltd. ESE Ltd. Electrohome Electronics Electrovert Ltd. Epic Data Sales Ltd. **Exide Electronics** Fairchild & Stairs Manufacturing Ltd. Ferritronics Ltd. Fortin Electronics Corp. Foxboro Canada Ltd. GEAC Canada Ltd. Gandalf Data Ltd. Glenayre Electronics Ltd. Leigh Instruments Ltd. Litton Systems Canada Ltd. Lloyd Controls Ltd. MCM Computers Ltd. K.O. Mair Associates Ltd. Matrox Electronic Systems Ltd. Memotec Microdesign Ltd. Mini-Peripherals Inc. Mira Electronics Ltd. Muirhead Systems Ltd. Northern Technologies Northern Telecom Ltd. Omnitech Graphics Systems Inc. Orcatech Inc. Perle Systems Ltd. Phoenix Automation Inc. Nabu Communications Terminals Nabu Mfg. Corp. Patrick Computer Systems Quopro Data Systems Inc. Red Pine Instruments Ltd. Remanco Systems Ltd. Simtron Ltd. Sonotek Ltd. Targa Electronics Systems Inc. **Taurus Computers Products** Inc. Trionics Communications Systems Ltd. Vertical Data Systems Inc. Western Scale Co. Ltd. Westinghouse Canada Ltd. Wynchester Systems & Electronics Inc. **ZBK** Telecomputers

Digital Equipment of

#### **COMPUTER GRAPHICS**

Adaptive Microelectronics
Ltd.
Athabasca Research Corp.
Ltd.
CAD/CAM Graphics
Systems
Cableshare Inc.
Canada Systems Group Ltd.
Canadian Astronautics Ltd.
dy-4 Systems Inc.
Digital Graphics Ltd.

Electrohome Electronics
MPB Technologies Inc.
Matrox Electronic Systems
Ltd.
Microdesign Ltd.
Omnitech Graphics Systems
Inc.
Orcatech Inc.
Phoenix Automation Inc.
Prior Data Sciences Ltd.
Taylor Instruments Ltd.

# CONTROL EQUIPMENT & SYSTEMS

AEL Microtel Ltd. Acme Engineering Products Adaptive Microelectronics The Amprotec Co. Appleton Electric Ltd. Ascolectric Ltd. Athabasca Research Corp. Ltd. Automatec **Bailey Controls** Barnes Engineering Co. Ltd. Bayly Engineering Ltd. Beckman Instruments Inc. Bristol Aerospace Ltd. Bristol of Canada Brown Boveri Canada Inc. CAE Electronics Ltd. CVDS Inc. Canadian Astronautics Ltd. Canadian General Electric Co. Ltd. Chubb Security Systems Circuit Design Corp. Comad Communications Commercial Electronics Ltd. dy-4 Systems Ltd. Dees Communications Engineering Ltd. Donaga Electronics Ltd. Durmitor Inc. ESE Ltd. Electro Vox Industries Ltd. Epic Data Sales Ltd. Exide Electronics Fairchild and Stairs Manufacturing Co. Ferritronics Ltd. Fisher Controls Co. of Canada Ltd. Garrett Manufacturing Co. Glenayre Electronics Ltd. Goodwood Data Systems Ltd. HiTech Canada Ltd. Honeywell Ltd. IRD Mechanalysis Ltd.

ITT Barton Instruments

J.L. Electron Ltd. Lanico Industries Ltd.

Lisle-Metrix Ltd.

Ltd.

Leak 'X'

Industrial Measurements

Leeds & Northrup Canada

# Made in Canada by Canadians... for the World Market





High Voltage Power Supplies and Rectifiers



MURATA ERIE NORTH AMERICA, INC.

5 Fraser Street Trenton, Ontario, Canada (613) 392-2581

Lloyd Controls Ltd. Lumitrol Ltd. Mechtronics Research Corp. Milltronics Mira Electronics Ltd. Motorola Canada Ltd. Novax Industries Corp. Pacific Meter Inc. Positron Industries Inc. Pylon Electronic Development Co. Ltd. Pylon Electronics Ltd. Quind Products Ltd. **RMS Industrial Controls** Reitek Inc. Richmond Sound Design Ltd. Rockwell International of Canada Sandtron Automation Ltd. Sentrol Systems Ltd. Siemens Electric Ltd. Sonotek Ltd. Southwell Controls Ltd. Sperry Inc. Surfline Engineering Ltd. Sutherland-Schultz Ltd. Systemhouse Ltd. Taylor Instrument Ltd. Thermo Electric (Canada) Topping Electronics Ltd. Tracon Engineering Ltd. Uni-Tel Ltd. Universal Technology Inc. Weltronic Company Western Scale Co. Ltd. Westinghouse Canada Ltd. Westronic Systems Ltd.

# COUNTING & TIMING DEVICES

Amerace Ltd. Analytic Systems Ware Ltd. Anro Electronic Industries Ltd. Barnes Engineering Co. Ltd. Biomen Inc. Bristol Aerospace Ltd. The Dictograph Corp. dy-4 Systems Inc. Emhart Canada Ltd. Lisle-Metrix Ltd. Lloyd Controls Ltd. Perle Systems Ltd. Pylon Electronic Development Co. Ltd. Red Pine Instruments Ltd. Sandtron Automation Ltd. Sonotek Ltd. Taylor Instrument Ltd. Unicorn Security Systems

#### DATA ACQUISITION

AEL Microtel Ltd.
Adaptive Microelectronics
Ltd.
alphaNUCLEAR Co.

Bristol of Canada CAE Electronics Ltd. CTF Systems Group Inc. CVDS Inc. Canada Systems Group Inc. Canadian Digital Express Canadian RGL Electronics Cableshare Inc. Cardion/DGI Division Computing Devices Co. Conspec Controls Ltd. Consultronics Ltd. Donaga Electronics Ltd. dy-4 Systems Inc. Dynalogic Info-Tech Corp. Epic Data Sales Ltd. Fairchild & Stairs Manufacturing Inc. Fisher Controls Co. of Canada Ltd. Glenayre Electronics Ltd. Hitech Canada Ltd. IRD Mechanalysis Ltd. Imapro Inc. Intera Environmental Consultants Ltd. J.L. Electron Leeds & Northrup Canada Ltd. Leigh Instruments Ltd. Litton Systems Canada Ltd. Lloyd Controls Ltd. Mechtronics Research Corp. OVAAC8 International (Canada) Inc. Systemhouse Ltd. Rantech Electronics Ltd. Reltek Inc. Miller Communications Systems Ltd. MacDonald, Dettwiler & Associates Ltd. Milltronics Mira Electronics Ltd. Normex International Inc. Numec Ltd. Positron Industries Inc. Presentey Engineering Products Ltd. Prior Data Sciences Ltd. RMS Industrial Controls Inc. Red Pine Instruments Ltd. Remanco Systems Ltd. SR Telecom Inc. Sander Geophysics Ltd. Sentrol Systems Ltd. Simtron Ltd. Sonotek Ltd. Sperry Inc. Techwest Enterprises Ltd. Thermo Electric (Canada) Ltd. Tracon Engineering Ltd. Uni-Tel Ltd. Western Scale Co. Ltd. Westinghouse Canada Ltd. Westronic Systems Ltd. Willowglen Systems Ltd.

Automatec

**Bailey Controls** 

Bristol Aerospace Ltd.

# DATA PROCESSING EQUIPMENT & SERVICES

Automatec CAE Electronics Ltd. Cybernex Ltd. Canada Systems Group Inc. Cableshare Inc. Computing Devices Co. Develcon Electronics Ltd. Dynalogic Info-Tech Corp. Epic Data Sales Ltd. Gandalf Data Ltd. Intera Environmental Consultants Ltd. MacDonald, Dettwiler & . Associates Ltd. Mira Electronics Ltd. NCR Canada Ltd. OVAAC8 International (Canada) Inc. Phalo Communications Société d'Innovation Technologique Ltée Sonotek Ltd. Trionics Communications Systems Ltd. Wynchester Systems & Electronics Inc.

#### DIGITAL CLOCKS, TIMERS, PROGRAMMERS AND EVENT RECORDERS

Automatec CVDS Inc. Cardion DGI Division Consultronics Ltd. EDA Instruments Inc. Emhart Canada Ltd. Fairchild & Stairs Manufacturing Ltd. Leigh Instruments Ltd. Leitch Video Ltd. Pylon Electronic Development Co. Ltd. RMS Industrial Controls Inc. Reltek Inc. Sonotek Ltd. Sperry Inc. Sutherland-Schultz Ltd. **Trionics Communications** Systems Ltd. Westronic Systems Ltd.

#### **DIGITIZERS**

Cybernex Ltd. Ferritronics Ltd. RMS Industrial Controls Inc. Thermo Electric (Canada) Ltd.

#### **DISPLAY SYSTEMS**

CAE Electronics Ltd.
Cableshare Inc.
Canadian Marconi Co. Ltd.
Computing Devices Co.
Comterm Inc.
Cybernex Ltd.
Data Images Inc.
Extel Communications
(Canada) Ltd.

# COMPARTNERSHIP



# Compar connectors, Compar people backing you all the way!



Compar works most effectively when we can work hand-in-hand with you. Our technical specialists are committed to recommending the precise product, of the highest quality and best cost, for your specific application. Compar, an all-Canadian company, would like to be part of your team and help you effect savings in manpower, materials and money. Call Compar, we'd love to give you a hand.

COMPAK

Compar, 105 Brisbane Rd., Downsview, Ontario M3J 2K6 Telephone (416) 663-5670, TWX 610-492-1337 DGW OF

Ferranti-Packard Electronics Ltd. Garrett Manufacturing Ltd. International Data Control Corp. Ltd. Leigh Instruments Ltd. Matrox Electronics Systems Nabu Commercial Terminals Optotek Ltd. Philips Electronics Ltd. Pylon Electronic Development Co. Ltd. Pylon Electronics Ltd. RMS Industrial Controls Inc. Raytheon Canada Ltd. Simtron Ltd. Tracon Engineering Ltd. **Trionics Communications** Systems Ltd. Westinghouse Canada Ltd.

# EDUCATIONAL & RELATED EQUIPMENT

Califone Industries Ltd. Canadian Research Institute Control Data Canada Ltd. Criterion Instruments Ltd. CETA Learning Systems EKEG Electronics Co. Ltd. **Electrohome Electronics** Geleco Electronics Ltd. Gen-Tec Inc. Goodwood Data Systems Hallcraft Electronics Ltd. Lab-Volt Ltd. Lionmount & Co. Ltd. Microdesign Ltd. Polytronics Engineering Ltd. Société d'Innovation Technologique Ltée Televox Systems Inc. **Trionics Communications** Systems Ltd.

# ELECTRO-OPTICAL & INFRARED EQUIPMENT

Zvook Corp.

Automatec
Canstar Communications
Honeywell Ltd.
I.S.B.
OVAAC8 International
(Canada) Ltd.
Photochemical Research
Associates Inc.
Spar Aerospace Ltd.

#### EMERGENCY LIGHTING

Audiotronics Enterprises
Ltd.
Automatec
Dual Lite Products Ltd.
Electric Power Equipment
Ltd.
Exide Electronics
Rycroft Systems Ltd.

# ENVIRONMENT INSTRUMENTATION & MONITORING

Automatec

Apex Parametrics Ltd. Biotech Barringer Research Ltd. CAE Electronics Ltd. Canadian Applied Technology Canadian Research Institute Computing Devices Co. Conspec Controls Ltd. Crone Geophysics Ltd. Deltronics Ltd. Dicon Systems Ltd. Fairchild and Stairs Manufacturing Ltd. Honeywell Ltd. MacDonald, Dettwiler & Associates Mechtronics Research Ltd. Milltronics Novatech Designs Ltd. Nu Rad Instrumentation **OVAAC8** International (Canada) Ltd. Pylon Electronics Ltd. RMS Industrial Controls Inc. Reltek Inc. Sperry Inc. Targa Electronics Systems Inc. Taylor Instrument Ltd. Thermo Electric (Canada) Ltd.

#### FIBER OPTICS SYSTEMS

Tracon Engineering Ltd.

Western Research and

Development Ltd.

Uni-Tel Ltd.

Canada Wire & Cable Co. Ltd. Canstar Communications Farinon Canada Ltd. Foundation Electronic Instrumentation Inc. Gandalf Data Ltd. Imapro Inc. M.S.C. Electronics Ltd. Northern Telecom Ltd. Phalo Communications

# GEOPHYSICAL EQUIPMENT

Pirelli Cables Inc.

CTF Systems Inc.
Canadian Applied
Technology
Coniagas Research Inc.
Dighem Ltd.
EDA Instruments Inc.
Geonics Ltd.
Geoprobe Ltd.
Geotech Ltd.
Huntec (1970) Ltd.
McPhar Geophysics
Northway-Gestalt Corp.
Numec Ltd.
Phoenix Geophysics Ltd.
Pylon Electronics Ltd.

Sander Geophysics Ltd.
Scintrex Ltd.
W. Sodin (Gravity) Ltd.
Sonotek Ltd.
Targa Electronics Systems
Ltd.
Urtec Ltd.

#### INTERCOMMUNI-CATIONS EQUIPMENT

Audor Communications Inc. Auto Vox Inc. CVDS Inc. Cableshare Inc. The Dictograph Corp. Electro Vox Industries Inc. Elina Communications Ltd. Executone Ltd. Gandalf Data Ltd. Hallcraft Electronics Ltd. Memotec Mirtone Industries Ltd. Multi-Vox Ltd. Perle Systems Ltd. Sperry Gyroscope Televox Systems Inc. Topping Electronics Ltd. **Trionics Communications** Systems Ltd. Uni-Tel Ltd. Vertical Data Systems Inc. Xicom Technologies Corp.

#### MEDICAL ELECTRONICS

Bach-Simpson Ltd. Biosig Inc. CTF Systems Inc. Canadian Research Institute Canadian Stackpole Ltd. EKEG Electronics Co. Ltd. Electrohome Electronics Graphic Controls Canada Ltd. Harco Electronics Ltd. Owl Instruments Ltd. Payton Associates Ltd. Radionics Ltd. Siemens Electric Ltd. Systemhouse Ltd. Unitron Industries Ltd.

# MICROWAVE SYSTEMS & EQUIPMENT

AEL Microtel Com Dev Ltd. Consultronics Ltd. Elinca Communications Ltd. Farinon Canada Ltd. MA Electronics Canada Ltd. M.S.C. Electronics Ltd. Mega System Design Ltd. Microdesign Ltd. Miller Communication Systems Ltd. Mitec Electronics Ltd. Motorola Canada Ltd. Neosid (Canada) Ltd. Raytheon Canada Ltd. Reliance Telecommunication

Telecommunication Products Ltd.

Spar Aerospace Ltd. **Tribar Industries Trionics Communications** Systems Ltd. Uni-Tel Ltd. Varian Associates of Canada Ltd. **MONITORING & SUPERVISORY** CONTROL Amplitrol Electronic Ascolectric Ltd. Automatec Richard Brancker Research Ltd. CAE Electronics Ltd. CVDS Inc. Calgary Controls Ltd. Canada Systems Group Inc. Century III Electronics Inc. Conspec Controls Ltd. Consultronics Ltd. Contronic Controls Ltd. Dicon Systems Ltd. Electric Power Equipment Co. Electrohome Electronics Electro Vox Industries Inc. Elinca Communications Ltd. Fairchild and Stairs Manufacturing Ltd. Ferranti-Packard Electronics Ferritronics Ltd. Fire Devices Mfg. Ltd. Garrett Manufacturing Ltd. Hermes Electronics Ltd. Industrial Measurements Itd Kerr-Ginge Canada Ltd. McQueen Technology Corp. Ltd. Miller Communications Systems Ltd. Milltronics Novax Industries Inc. Perle Systems Ltd. Photovac Inc. Positron Industries Inc. RMS Industrial Controls Inc. Red Pine Instruments Ltd. SED Systems Inc. Simtron Ltd. Sioc Ltd. Sonotek Ltd. Sperry Inc. Surfline Engineering Ltd. Sutherland-Schultz Ltd. Taurus Computer Products Inc Tentek Industries Thermo Electric (Canada) Topping Electronics Ltd. Tracon Engineering Ltd. Uni-Tel Ltd. Western Research & Development Ltd.

Rockwell International

of Canada Ltd.

SR Telecom Inc.

Westronic Systems Ltd.

#### MULTIPLEX EQUIPMENT

Automatec Bayly Engineering Ltd. CVDS Inc. Direct Digital Industries Ltd. ENA Datasystems Inc. Elinca Communications Ltd. Farinon Canada Ltd. Gandalf Data Ltd. General Datacomm Industries (Canada) Ltd. International Systcoms Ltd. Memotec Miller Communications Systems Ltd. Mira Electronics Ltd. Quindar Products Ltd. RMS Industrial Controls Inc. Raytheon Canada Ltd. SR Telecom Inc. Simtron Ltd. Sperry Inc. Tran Communications Ltd. Uni-Tel Ltd. **ZBK Telecomputers** 

# NAVIGATION & DIRECTION FINDING EQUIPMENT

Analytic Systems Ware Ltd. Aviation Electric Ltd. Bayly Engineering Ltd. C-Tech Ltd. Canadian Marconi Co. Cardion/DGI Division Computing Devices Co. Ekolite Ltd. Leigh Instruments Ltd. Leigh Navigation Systems Ltd. Miller Communications Systems Ltd. Novatech Designs Ltd. Philips Electronics Ltd. Polestar Antenna Co. Ltd. Raytheon Canada Inc. Rockwell International of Canada Ltd. Sperry Marine Systems Spilsbury Communications Westinghouse Canada Ltd.

# NUCLEAR INSTRUMENTATION

INSTRUMENTATION
alphaNUCLEAR Co.
Aptec Engineering Ltd.
Bristol Aerospace Ltd.
CAE Electronics Ltd.
Pylon Electronic
Development Co. Ltd.
Pylon Electronics Ltd.
R-Metrics Ltd.
Reuter-Stokes Canada Ltd.
Sciex Inc.
Scintrex Ltd.
Simtron Limited
Thermo Electric (Canada)
Ltd.

Tracon Engineering Ltd. Westinghouse Canada Ltd.

# OCEANOGRAPHY & METEROLOGY

Aanderaa Instruments Ltd. Aero Aqua Inc. Alma Industries Ltd. Applied Microsystems Ltd. Athabasca Research Corp. Audiotronics Enterprises Ltd. C-Tech Ltd. Ekolite Ltd. Goodwood Data Systems Ltd. Guildline Instruments Ltd. Hermes Electronics Ltd. Huntec ('70) Ltd. MacDonald, Dettwiler & Associates Ltd. Mesotech Systems Ltd. Muirhead Systems Ltd. Normex International Inc. Novatech Designs Ltd. RMS Industrial Controls Inc. Sparton of Canada Ltd. Targa Electronic Systems Wellsdale Research Ltd. Westinghouse Canada Ltd.

# POSTAL AUTOMATIC SYSTEMS

Bayly Engineering Ltd. Leigh Instruments Ltd. Sutherland-Schultz Ltd.

#### POWER SUPPLIES, STATIC INVERTERS & CONVERTERS

Aircraft Appliances &

Equipment Ltd. Analytic Systems Ware Ltd. Anatek Electronics Ltd. Automatec Beel Controls Ltd. Brown Boveri Canada Inc. **CETA Learning Systems** CTS of Canada Ltd. CVDS Inc. Canadian Research Institute Century III Electronics Inc. Chloride Systems (Canada) Ltd. Criterion Instruments Ltd. Electric Power Equipment Elinca Communications Ltd. Elkay Electronics Ltd. **Exide Electronics** Glenayre Electronics Ltd. K.B. Electronics Lab-Volt Ltd. Lloyd Controls Ltd. Mechron Engineering Products Ltd. Mega Systems Design Ltd. Murata Erie North America Inc. NIFE-Powertronic Corp. Novac Industries Corp.

Philips Electronics Ltd. Photochemical Research Associates Ltd. Polytronics Engineering Ltd. Pylon Electronic Development Co. Ltd. Reliance Telecommunications Products Ltd. Rochester Instrument Systems Ltd. Rycroft Supplies Ltd. Siemens Electric Ltd. Sparton of Canada Ltd. Standby Electronics Ltd. Staticon Ltd. Systemhouse Ltd. Tectrol Inc. Telecom Power Corp. Topping Electronics Ltd. Tracon Engineering Ltd. **Trionics Communications** Systems Ltd. Tycor Electronic Products Ltd. Valcom Ltd. Varian Associates of Canada Ltd.

#### **PROCESS CONTROL**

Canadian Digital Express Co. Crescent Controls Ltd. Electrohome Electronics Fisher Controls Company of Canada Ltd. Pacific Meter Inc.

#### **PRODUCTION MACHINERY & EQUIPMENT**

Barnes Engineering Co. Ltd. Beel Controls Ltd. Canada Stamp and Stencil Co. Ltd. Electrovert Ltd. Strite Industries Ltd. Sutherland-Schultz Ltd. Thermo Electric (Canada)

#### **RADAR SYSTEMS & ANCILLARY EQUIPMENT**

Bayly Engineering Ltd. Control Data Canada Ltd. Canadian Marconi Co. Computing Devices Co. Elinca Communications Ltd. Garrett Manufacturing Ltd. Leigh Navigation Systems Litton Systems Canada Ltd. Miller Communications Systems Ltd. Raytheon Canada Ltd. Sperry Inc. Tribar Industries

Westinghouse Canada Ltd.

#### RECORDERS

Aanderaa Instruments Ltd. Audor Communications Inc. **Bailey Controls** Bristol of Canada CAE Electronics Ltd. Califone Industries Ltd. Cardion/D.G.I. Division Computing Devices Co. Fisher Controls Company of Canada Ltd. Foxboro Canada Ltd. Graphic Controls Canada Ltd. Hermes Electronics Ltd. Imapro Inc. Leeds & Northrup Canada Leigh Instruments Ltd. MacDonald, Dettwiler & Associates Ltd. Presentey Engineering Products Ltd. Rochester Instrument Systems Ltd. Targa Electronic Systems Taylor Instruments Ltd. Thermo Electric (Canada)

#### REGULATORS, **VOLTAGE & FREQUENCY**

Topping Electronics Ltd.

Western Scale Co. Ltd.

Westronic Systems Ltd.

Ltd.

Aircraft Appliances & Equipment Ltd. Baron Communications Ltd. K.B. Electronics Ltd. George Kelk Ltd. NIFE-Powertronic Corp. Pylon Electronic Development Co. Ltd. Staticon Ltd. Telecom Power Corp.

#### **REPAIR & OVERHAUL SERVICES**

Aviation Electric Ltd. CAE Electronics Ltd. Canadian Marconi Co. Elinca Communications Ltd. Garrett Manufacturing Ltd. Miller Communications Systems Ltd. Milltronics Pacific Meter Inc. Red Pine Instruments Ltd. Rockwell International of Canada Ltd. **Trionics Communications** Systems Ltd.

#### **TELEGRAPH EQUIPMENT**

Elinca Communications Ltd. **ITT Communications** Intercontinental Data Control Corp. Ltd. Mechtronics Research Corp.

#### **TELEMETERING EQUIPMENT**

Automatec Bristol Aerospace Ltd. CAE Electronics Ltd. CVDS Inc. Canadian Applied Technology Conspec Controls Ltd. EKEG Electronics Co. Ltd. Ferritronics Co. Ltd. M.S.C. Electronics Ltd. Quindar Products Ltd. **RMS Industrial Controls** Inc. Rantec Electronics Ltd. Surfline Engineering Ltd. **Taurus Computer Products** Topping Electronics Ltd. Uni-Tel Ltd. Westronic Systems Ltd.

#### TELEPHONE **EQUIPMENT/ SYSTEMS**

A.E.I. Telecommunications (Canada) Ltd. AEL Microtel Ltd. Bayly Engineering Ltd. Richard Brancker Research Brown Boveri Canada Inc. CVDS Inc. Calgary Controls Ltd. Century III Electronics Inc. Commutron Ltd. Comptec International Ltd. Culver Dynamics Ltd. Dees Communications Engineering Ltd. Dial-a-Tronics Inc. ESE Ltd. Elinca Communications Ltd. Executone Ltd. Ferranti-Packard Electronics Glenayre Electronics Ltd. ITT Communications Lynch-Transom Inc. Microtronix Systems Ltd. Mira Electronics Ltd. Mitel Corp. Ltd. Motorola Canada Ltd. National Electrolab Ltd. Northern Telecom Ltd. Novax Industries Corp. Pirelli Cables Inc. Plessey Canada Ltd. Positron Industries Inc. Pylon Electronic Development Co. Ltd. Reliance Telecommunication Products Ltd. SR Telecom Inc. Siemens Electric Ltd.

**TD Telephone Products** 

Ltd.

Tele-Radio Systems Ltd. Televox Systems Inc. Thrush Inc. Topping Electronics Ltd. Uni-Tel Ltd. Westech Systems Ltd. ZBK Telecomputers

# TELEVISION EQUIPMENT & SYSTEMS

Ampex Canada Inc. Canadian Research Institute Central Dynamics Ltd. Comad Communications Delta-Benco-Cascade Ltd. Digital Video Systems **Dynatel Systems** Electrohome Electronics Elinca Communications Ltd. Kelcee Communications Larcan Communications Equipment Ltd. Leitch Video Ltd. Lindsay Specialty Products Ltd. Lumitrol Ltd. M.S.C. Electronics Ltd. McCurdy Radio Industries Microdesign Ltd. Motorola Canada Ltd. RCA Ltd. Ross Video Ltd. Scannex International Skotel Corp. **Trionics Communications** Systems Ltd. Triple Crown Electronics Inc.

#### TESTS, LABORATORY & MEASURING EQUIPMENT

Viscount Industries Ltd.

Amber Electro Design Inc. Bomem Inc. CAE Electronics Ltd. CTF Systems Inc. Consultronics Ltd. Computing Devices Co. Criterion Instruments Ltd. Diffracto Ltd. Donaga Electronics Ltd. Dynalogic Info-Tech Corp. EDA Instruments Inc. **Eddy Current Technology** Elinca Communications Ltd. Fairchild and Stairs Manufacturing Ltd. Fischer & Porter (Canada)

Foxboro Canada Ltd.

Ltd.

Gandalf Data Ltd. Geleco Electronics Ltd. Guildine Instruments Ltd. Harrison, Williams & Associates Ltd. Huntec ('70) Ltd. IRD Mechanalysis Ltd. Lanico Industries Ltd. Leblanc & Royle Communications Ltd. Leeds & Northrup Canada Leitch Video Ltd. Lionmount & Co. Ltd. Lisle-Metrix Ltd. Litton Systems Canada Ltd. Lumonics Inc. Navtel Ltd. Noram Quality Control & Research Equipment Ltd. Northern Telecom Ltd. Photochemical Reseach Associates Ltd. Reltek Inc. Scintrex Ltd. Securatest Manufacturing

Siemens Electric Ltd.
Tele-Radio Systems Ltd.
Thermo Electric (Canada)
Ltd.
Tribar Industries
Trionics Communications
Systems Ltd.

Western Research & Development Ltd. Western Scale Co. Ltd. Westinghouse Canada Ltd.

# TOWERS & ACCESSORIES

Elinca Communications
Ltd.
General Instrument of
Canada Ltd.
Leblanc & Royle
Communications Ltd.
Leigh Navigation Systems
Ltd.
Maxtower Co. Ltd.
Polestar Antenna Co.
Ltd.
Pylonex Inc.
Racal-Decca Canada Ltd.
Up-Right Scaffolds Ltd.
The Wind Turbine

#### **TRANSDUCERS**

C-Tech Ltd.
Fischer & Porter (Canada)
Ltd.
Fisher Controls Co. of
Canada Ltd.

Company of Canada Ltd.

# TRANSMITTERS Bailey Controls

Bayly Engineering Ltd. Canadian Digital Express Ltd. Canadian General Electric Co. Ltd. Canadian Marconi Co. Crone Geophysics Ltd. Daniels Electronics Ltd. Elinca Communications Ltd. Fisher Controls of Canada Ltd. Garrett Manufacturing Ltd. Hermes Electronics Ltd. Huntec ('70) Ltd. **ITT Barton Instruments** K.B. Electronics Leeds & Northrup Canada Ltd. M.S.C. Electronics Ltd. Miller Communications Systems Ltd. Motorola Canada Ltd. Nautical Electronic Laboratories Ltd. Polestar Communications Ltd. RMS Industrial Controls Inc. SR Telecom Inc. Spilsbury Communications

#### **ULTRASONICS**

Taylor Instrument

Ltd.

Ltd.

Alma Industries Ltd.
C-Tech Ltd.
CTF Systems Inc.
Milltronics
Pacific Meter Inc.
Westinghouse Canada Ltd.

Thermo Electric (Canada)

#### VIDEOTEX (Telldon)

AEL Microtel Ltd.
Cableshare Ltd.
Electrohome Electronics
Gandalf Data Ltd.
Memotec
Northern Telecom Ltd.
Systemhouse Ltd.

# WORD PROCESSING EQUIPMENT

A.E.S. Data Ltd. GEAC Canada Ltd. Philips Information Systems Ltd.

#### **COMPONENTS**

#### **BATTERIES**

Duracell Inc. Nife-Powertronics Corp. Prestolite Battery Saft Batteries Ltd. Standby Electronics Inc. Unican Security Systems

#### CABLE, HARNESSES, WIRE Amphenol Canada Inc.

Andrew Antenna Co.

Ltd. Boston Insulated Wire & Cable Co. Ltd. CTS of Canada Ltd. Cabco Research Ltd. Canada Wire and Cable Co. Ltd. Electrovert Ltd. Esmond Manufacturing Harbour Industries (Canada) Ltd. Johnson Mathey Ltd. Leblanc & Royle Communications Inc. Leecraft Industries Ltd. Mark Products Ltd. Nife-Powertronic Corp. Northern Technologies Pirelli Cables Inc. Reuter-Stokes Canada Ltd. Ribbonhouse Assemblies Itd. Shaw Flexible Tubes Ltd. Standby Electronics Inc. Tech 5 Ltd. Thomas & Betts Ltd. Tracon Engineering Ltd. Valcom Ltd.

#### **CAPACITORS**

Emhart Canada Ltd.
Murata Erie North America
Inc.
Siemens Electric Ltd.
Sprague Electric of Canada
Ltd.

#### **CERAMICS**

Alma Industries Ltd.

#### COILS, AF, IF, RF

Automatic Winding Corp. CETA Learning Systems Canadian Marconi Co. Electronic Craftsmen Emhart Canada Ltd. Filtran Ltd.
L.H. Frost Ltd.
Geleco Electronics Ltd.
Hammond Mfg. Co.
Ltd.
Leecraft Industries Ltd.
McNeill Electronics Ltd.
Renfrew Electric Co.
Ltd.
S.G. Smallwood Ltd.
TMC (Canada) Ltd.

#### CONNECTORS

Amerace Ltd. Amphenol Canada Inc. Aviation Electric Ltd. Burndy Inc. Century III Electronics Compar Connectors Dale Electronics Canada Ltd. EDAC Inc. ITT Cannon Electric Canada Leblanc & Royle Communications Inc. Leecraft Industries Ltd. Murata Erie North America Inc. Renfrew Electric Co. Ltd. Ribbonhouse Assemblies Ltd.

#### CONTROLS (Motor, Safety, etc.) Analytic Systems Ware

TMC (Canada) Ltd.

Thomas & Betts Ltd.

Weber Electronics

Tech 5 Ltd.

Ltd.
Automatec
Barnes Engineering Co.
Ltd.
Stevens Controls Ltd.
Sutherland-Schultz Ltd.

Weltronic Co.

# CRYSTALS, CRYSTAL OSCILLATORS, CRYSTAL OVENS

CTS of Canada Croven Crystals Crystech Co. Ltd. Leigh Instruments Ltd. Motorola Canada Ltd. Philips Electronics Ltd.

# DISPLAYS (LED and Liquid Crystal)

Beckman Instruments Inc. Comterm Inc. Data Images Inc. Optotek Ltd. Siemens Electric Ltd.

#### & TV TUBES RCA Ltd.

# **ELECTRONIC**HARDWARE

B&K Plastic
Barnes Engineering Co.
Ltd.
Comad Communications
Ltd.
Com Dev Ltd.
Comtherm
Cords (Canada) Ltd.
Garrett Mfg. Ltd.
Leblanc & Royle
Communications Ltd.
Milltronics
Perle Systems Ltd.
Plastiglide Ltd.
Seimac Ltd.

#### **FILTERS**

CTS of Canada Ltd. Canadian Marconi Co. Com Dev Ltd. Crystech Ltd. Ferritronics Ltd. Filtran Ltd. Larcan Communications Equipment Ltd. Leigh Instruments Ltd. Murata Erie North America Inc. P.G. Electronics S.G. Smallwood Ltd. Sinclair Radio Laboratories Ltd. TD (Canada) Ltd. Tycor Electronic Products Ltd.

#### **INSULATORS**

Dominion Tape of Canada Ltd. Racal-Decca Canada Inc. Synthane-Taylor (Canada) Ltd.

# INVESTMENT CASTINGS

Cercast Inc. Shellcast Foundries Inc.

#### **LAMINATIONS**

Magnetic Metals Ltd.

#### LEAD FRAMES

Batten Graphics Ltd.

#### LOUDSPEAKERS

**British Acoustics** 

## Canada in the world of electronics

Cambridge Speakers Ltd. Energy Loudspeaker Corp. M.S.C. Electronics Ltd. PSB Speakers Inc. Paisley Research Ltd. Soma Electronics Ltd. Yorkville Sound Ltd.

#### **MAGNETIC TAPES**

Control Data Canada Ltd. M.S.C. Electronics Ltd. Pan Canada Magnetics Ltd.

# METAL PARTS, CABINETS, ETC.

Armor Enclosures Devtek Corp. El-Met Parts Ltd. Electrohome Metal Operations Electrovert Ltd. Engelhard Industries of Canada Ltd. Hammond Mfg. Co. Ltd. Lloyd Controls Ltd. Magna International Inc. Magnetic Metals Ltd. W.C. Pursley Ltd. Pylon Electronic Development Co. Rayshield Ltd. Tracon Engineering Ltd.

#### METER COMPONENTS

Bach-Simspon Ltd.

#### **MICROCIRCUITS**

Canadian Marconi Co. Epitek Electronics Ltd. Garrett Mfg. Ltd. Linear Technology Inc. Mitel Corp. Northern Telecom Ltd. Perle Systems Ltd. Siltronics Ltd.

#### **MICROPHONES**

Geleco Electronics Ltd. M.S.C. Electronics Ltd.

# MICROWAVE COMPONENTS

Com Dev Ltd.
Lindsay Specialty Products
Ltd.
MA Electronics Canada Ltd.

#### MOTORS, SUB-FRACTIONAL HORSEPOWER

Electrohome Industrial Products Div. Novatronics of Canada

#### PACKAGED ELECTRONICS CIRCUITS

CTS of Canada Ltd.
Epitek Electronics Ltd.
Fairchild & Stairs Mfg.
Ltd.
Garrett Mfg. Ltd.
Linear Technology Inc.
Lloyd Controls Ltd.
Perle Systems Ltd.
Positron Industries Inc.
Simton Ltd.
Surfline Engineering Ltd.

# PHOTOCONDUCTIVE & PHOTOELECTRIC DEVICES

Silonex Inc.

#### **PLATING**

Avionics Co. Canadian Marconi Co. Hamilton Engraving Co.

#### **POTENTIOMETERS**

Beckman Instruments Ltd. CTS of Canada Ltd. Dale Electronics Canada Ltd. Precision Electronic Components Ltd.

# POWDERED IRON & FERRITE COMPONENTS

Neosid (Canada) Ltd.

# PRINTED CIRCUIT BOARDS

Avionics Co. Baron Communications Ltd. CAD/CAM Graphics Systems Ltd. Camptech Circuits Inc. Canadian Marconi Co. Circo-Craft Co. Inc. Circuit Graphics Ltd. Computer Assembly Systems Inc. Digital Graphics Inc. Electrovert Ltd. Esmond Manufacturing Inc. Fineline Circuits Ltd. Glenayre Electronics Ltd. Hamilton Engraving Co. Hylogic Inc. Konar Corp. Lazer-Tech Ltd. **Lightning Circuits** Electrohome Ltd. Lloyd Controls Ltd.

Milltronics
Omnitech Graphics Systems
Inc.
PC World Circuits Inc.
Perle Systems Ltd.
RDC Electronics Inc.
Southwell Controls Ltd.
Space Circuits Ltd.
Synthane-Taylor (Canada)
Ltd.
Xicon Technologies Corp.

#### PRINTED CIRCUITS

CAD/CAM Graphic Systems
Ltd.
Canadian Marconi Co.
Circo Craft Co. Inc.
Digital Graphics Ltd.
Garrett Mfg. Ltd.
Henotex Inc.
Perle Systems Ltd.
Surfline Engineering
Ltd.

#### **RECTIFIERS**

Brown Boveri Canada Inc. CTS of Canada Ltd. Murata Erie North America Inc. Nife-Powertronics Corp. Reliance Telecommunication Products Ltd.

#### **RELAYS**

Allan-Bradley Canada Ltd. Amerace Ltd. Amprotec Co. De-Taylec Ltd. Honeywell Ltd. Renfrew Electric Co. Ltd. Siemens Electric Ltd. Stevens Controls Ltd. Sutherland-Schultz Ltd. TD (Canada) Ltd. Tele-Radio Systems Ltd.

#### RESISTORS

Bayly Engineering Ltd.
Beckman Instruments Inc.
CTS of Canada Ltd.
Dale Electronics Canada
Ltd.
Electronic Hardware
Specialties Ltd.
Epitek Electronics Ltd.
Racal-Decca Canada Ltd.
Renfrew Electric Co. Ltd.

#### **SENSORS**

Barnes Engineering Co. Ltd. Cantherm Edwards International R.C. Maybee Ltd. Moniteq Ltd. RCA Ltd.

## Canada in the world of electronics

Rochester Instrument Systems Ltd. Sentrol Systems Ltd. Sparton of Canada Ltd. Thermo Electric (Canada) Ltd.

#### **SERVOS & SYNCHROS**

Novatronics of Canada Ltd.

#### **SOLDER & FLUXES**

Cramco Solder Alloys

#### **SOLID-STATE DEVICES**

Anatek Electronics Ltd. Cantherm Epitek Electronics Ltd. Ferritronics Ltd. Linear Technology Inc. Mitel Corp. Ltd. MOSAID Inc. Optotek Ltd. Perle Systems Ltd. Reliance Telecommunication Products Ltd. Siemens Electric Ltd. Silonex Inc. Siltronics Ltd. Surfline Engineering Ltd. Sutherland-Schultz Ltd. Weltronic Co.

Westinghouse Canada Ltd.

#### **SWITCHES**

Allan-Bradley Canada Ltd.
Amprotec Co.
Anro Electronic Industries
Ltd.
Ascolectric Ltd.
Beckman Instruments
Burgess Switch Co.
CTS of Canada Ltd.
Coptec International Ltd.
Edwards International
ITT Barton Instruments
Leecraft Industries Ltd.
Perle Systems Ltd.
Thermo Electric (Canada)
Ltd.

# TACHOMETER GENERATORS

Aircraft Appliances & Equipment Ltd.
Beckman Instruments Southwell Controls Ltd.

# TELEPHONE COMPONENTS

Culver Dynamics Ltd. The Dictograph Corp. Leecraft Industries Ltd. Reliance Telecommunication

Products Ltd.

#### TRANSDUCERS

Automatic Winding Corp. Ltd.

Aviation Electric Ltd.
Beckman Instruments Ltd.
Consultronics Ltd.
IRD Mechanalysis Ltd.
Milltronics
Sparton of Canada Ltd.

# TRANSFORMERS & INDUCTIVE COMPONENTS

ATC Mfg. Ltd. Anatek Electronics Ltd. Automatec Automatic Winding Corp. Bach-Simpson Ltd. Bayly Engineering Ltd. Canadian Marconi Co. Electronic Craftsmen Filtran Ltd. L.H. Frost Ltd. Geleco Electronics Ltd. Hammond Mfg. Co. Ltd. Lazare Electronics Ltd. McNeill Electronics Ltd. Racal-Decca Canada Ltd. S.G. Smallwood Ltd. Sola Canada TD (Canada) Ltd. Tracon Engineering Ltd.

# **ADVERTISERS' INDEX**

Adaptive Microelectronics Ltd.       18         ADGA Group       53         Camptech Circuits Inc.       100         Century III Electronics Inc.       93         Circo-Craft Co. Inc.       94         Com Dev Ltd.       98         Comptec International Ltd.       92         Comterm Inc.       101         Croven Crystals       95	Garrett Manufacturing Limited . 4 Glenayre Electronics Ltd 102 ITT Cannon . IBC ITT Industries of Canada Ltd.,     Communications Division . 107 K B Electronics Ltd 100 Mitel Corp
CTS of Canada, Ltd 96, 103, 106	Northern Telecom Ltd54,55
Cybernex Ltd	Orcatech Inc
Data Images Inc	Scintrex Ltd
Digital Graphics Ltd	Targa Electronics Systems Inc
EDAC Inc	Telecom Power Corp 67
Elinca Communications Ltd	Tycor Electronic Products Ltd
Fairchild & Stairs Manufacturing Ltd 104 Farinon Canada	Volker-Craig LtdIFC Westinghouse Canada Inc104
annon canada	westinghouse canada inc

# Keytop problems?



# **COMPTEC** has the answers!

Comptec is one of the leading companies in the world in keytop technology. Comptec offers several families of keytops for standard keyboards, personal computers and DIN style keyboards required in Europe. We also offer more than 100 shapes, more than 1,000 free legends and more than 100 colors for you to select from. Keytop interiors are available for almost every switch made as well as loose adapters for universal keytops. Comptec offers fast prototype service, either two-color molded keytops or keytops printed with penetrating dies...

#### **COMPTEC INTERNATIONAL LTD.**

7847 Venture Street Burnaby, B.C., Canada V5A 1V1 Phone (604) 420-2830 Telex: 04-354548

#### COMPTEC, INC.

7837 Custer School Rd. Custer, Wash. 98240 Phone (206) 366-5044 Telex: 00152-536

#### **COMPTEC FRANCE**

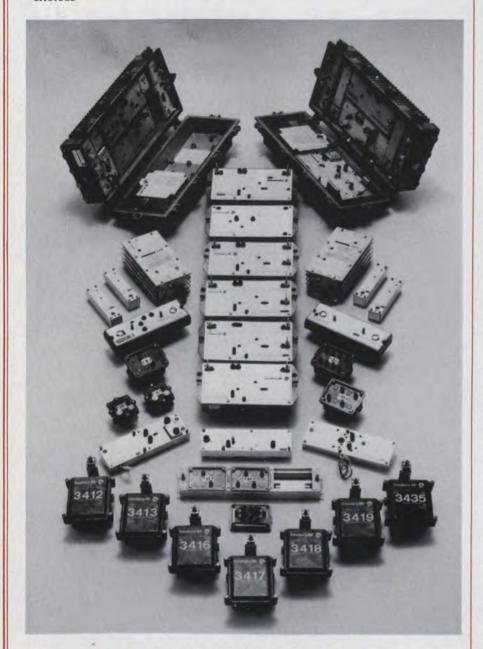
58 rue Pottier 78150 Le Chesnay Phone 954.83.40 Telex: 695471F

# **Century III Electronics Inc.**

an international company

श

Century III . . . innovators in high quality broadband communications networks. Century III can give you more value with more options and choices



#### Century III Directors & Officers

President & General Manager Secretary & Treasurer Vice-President, Manufacturing Vice-President, Engineering Vice-President & General Manager U.S.A. Operations

- Mery L. Hussack
- Rolf Belz
- Charles G. Hawson
- Ronald S. Solomon
- Larry Fry

# श

# Century III Electronics Inc.

1580 Rand Avenue, Vancouver, B.C. Canada

#### Service & Plant Locations

#### **Plants**

Century III Electronics, Inc. 1580 Rand Avenue, Vancouver, British Columbia V6P 3G2 (604) 263-0911

Century III Electronics, Inc. Ave Ruiz Cortinez 595 Nogales, Sonora, Mexico 2-77-78

#### Sales Locations

Century III Electronics, Inc. 1580 Rand Avenue, Vancouver, British Columbia V6P 3G2 (604) 263-0911

Century III Electronics, Inc. 3880 E. Eagle Drive, Anaheim, California 92807 (714) 630-3714

Century III Electronics, Inc. 32 Voyageur Court South Rexdale, Ontario M9W 5M7 (416) 675-4077

Century III Electronics, Inc. 8439 Dalton Road, Town of Mount Royal Montreal, Quebec H4T 1B5 (514) 739-1976

#### Distributors

Electro Service N.V. Kleine Nieuwendijk 40 B-2800 Mechelen, Belgium Twx — 4634093 +

Hirschmann Electric Oberer Paspelsweg 6-8 A-6830 Rankweil-Brederis Austria

Twx - 4852239+

Cable - Com Room 207 Yupango Bldg. Buendia Ave. Ext. Makati, Metro Marula Philippines 7563436 +

# CIrco Craft co.inc. ...means excellence in printed



# circuit boards!

- ultra modern high-volume manufacturing facility of 100,000 square feet
- highly qualified personnel
- leader in the industry
- innovative processes
- UL approved



We look forward to serving you with the same high quality, prompt delivery and competitive prices which have placed us in the forefront of our industry.



# circo craft co. inc.

17600 Trans Canada Hwy., Kirkland, Que. H9J 3A3 Canada Tel.: (514) 694-8000 Telex: 05-823523 Twx: 610-531-6600



If we can help you with your requirement, just call or write us for our free catalogue. All U.S. shipments are quoted in U.S. dollars f.o.b. BUFFALO, N.Y. We clear customs and pay all duties.

# **CROVEN CRYSTALS**

Division of Kidde Canada Limited

500 Beech Street, Whitby, Ontario, Canada Telephone (416) 668-3324 TWX 610-384-2750



CTS OF CANADA, LTD.



# CYBERNEX



# Take a real close look. Here's why.

ver the last 8 years Cybernex video terminals have evolved around the needs of our broad base of repeat customers.

Our early exposure to the rigorous demands of the Canadian and European marketplaces has two important results. A high quality product and a strong commitment to customer support.

Add to this, our designed-in ergonomics and a compact attractive enclosure and you get the best of both worlds. User acceptance and long term reliability.

We now offer a wide range of standard products and enhanced emulations for compatibility with most systems available today. We also specialize in adapting our terminals to meet the unique

needs of our customers.

Current models include Tektronix compatible high resolution graphics, Burroughs TD830 Series, Honeywell VIP 7800 Series, Data General Dasher, Basic-Four, Hazeltine, DEC, CDC and LSI compatible models plus our own powerful line of OEM terminals including the XL-87 pictured here.

**OEMs take note.** Cybernex provides a reliable product available only to value

added resellers. This allows OEMs to profitably resell Cybernex terminals and to maintain a unique visual identity for their systems.

If this sounds like the kind of pro-

If this sounds like the kind of product and supplier you have been looking for, contact us today. Take a closer look. Then the company of the contact us today. The contact us today.

Head Office and Manufacturing Plant Cybernex Limited, 1257 Algoma Road, Ottawa.

Ontario, Canada KIB 3W7 Telephone: (6)3 741-1540 Telex: 053-4419

Marketing and International Sales Cybernex Limited, 2457 Dunwin Drive, Mississruga, Ontario, Canada LSI, ITI Telephone: (4)6 828-2810 Telex: 065-22093

Cybernex U.S., 6490 Excelsion Blvd., Minneapolis, MN, 55426 Telephone: (6)2 929-5567

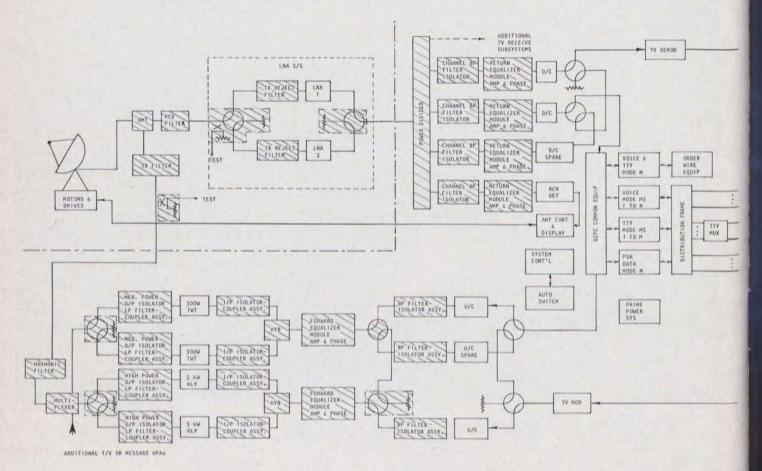
Cybernex U.K., 73 Holywell Road, Studham, Bedfordshire, England LU6 2PD Telephone: (6)582-872055 Telex: 826314

## **BLOCK DIAGRAM OF A TYPICAL EARTH STATION**

HIGHLIGHTING COM DEV COMPONENTS



= COM DEV'S STANDARD CATALOGUE PRODUCTS.



OUR BUSINESS IS SUPPLYING THE COMPONENTS -OUR STRENGTH IS APPLYING THE TECHNOLOGY

Catalogue of Earth Station Subsystems and Components Available.



155 SHELDON DRIVE, CAMBRIDGE, ONTARIO, CANADA N1R7H6 TEL: (519) 622-2300 TWX: 610-366-3164



MICROWAVE DEVICES AND SUBSYSTEMS FOR TERRESTRIAL AND SATELLITE COMMUNICATIONS

# EDAC'S WORLD



# There are over 700,000 excellent reasons why more and more companies are coming to EDAC for their card-edge connector needs.

When you add up all the series of card edge connectors, the full magnitude of contact sizes, single and dual readouts, the myriad of available contact spacing, plating choices and material, insulator materials, available card guides and termination styles, you will be pleasantly surprised to learn that it comes to over 700,000 choices available to your company. Impressive!

What is equally impressive is the kind of company EDAC is. The Chairman of the

Board still reads all the orders as they come in. So does the President. And they both still get a "kick" out of doing that.

It is, therefore, not so surprising to learn that EDAC probably offers the fastest delivery time and quick turnaround. It also has the desire and ability to manufacture to custom specifications efficiently and with justifiable pride. We believe you will find it a pleasure to do business with a Company that has not forgotten all the

good reasons that made it grow.

For more detailed information and your free comprehensive catalogue, please contact EDAC, today.

EDAC INC. 20 Railside Road. Don Mills (Toronto) Ontario M3A 1A4 Tel.: 416-445-2292 TWX: 610-492-1398

EDAC Connectors are C.S.A. and U.L. approved and are available throughout the major countries of the world.

# CAMPTECH'S COMPLETE SERVICE

#### **EVOLUTION OF A PRINTED CIRCUIT BOARD**

At CAMPTECH the combination of knowing all the facets of the design process and hands on printed circuit board processing experience provides you, the customer, with all the ingredients necessary to give you a superior end product, delivered on time.

We will look after all, or part, of your requirements in your PRINTED CIRCUIT POARD.

We will look after all, or part, of your requirements in your PRINTED CIRCUIT BOARD cycle.

In order to produce a high quality printed circuit, it is essential to have:

- a) accurate artwork and documentation
- b) latest technology and processing expertise

#### 1. ARTWORK

(MANUAL, Computer Aided Design or Design Automation) 5 to 10 working days depending on complexity.

#### 2. ETCHED BOARDS

(Single sided, double sided, multi-layer to 4 layers. NC drilling, Gold Plating, Solder Mask, Idents) Prototypes in 3 to 5 working days Production runs 2 to 4 weeks lead time

#### 3. ASSEMBLY

(MANUAL, Semi-Automatic, Wave Soldering) Prototypes 5 to 10 working days Production runs 3 to 5 weeks lead time

### Camptech CIRCUITS INC

3241 Kennedy Road, Scarborough, Ontario M1V 2J8

Let us arrange for a comprehensive analysis of your PRINTED CIRCUIT BOARD REQUIREMENTS

KE Electronics Limited



REPRESENTED IN EASTERN CANADA BY: DOLPHIN ELECTRONICS TEL: (902) 463-6684

IN WESTERN CANADA BY: PANTECH INT'L. INDUSTRIES LTD. TEL: (604) 324-6228

IN U.S.A.
BY: PILOT MARINE ASSOCIATES, INC.

DISTRIBUTORS IN EUROPE, AFRICA, SOUTH AMERICA AND AUSTRALIA.

KE Isolated Converter

KE Marine Power Supply

KE Laboratory Power Supply

**Watch Receiver** 

KE E/C Console

#### **NEW PRODUCTS**

W/T CONSOLES
EPIRB-MARINE (BEACON)
EPIRB-MARINE (PORTABLE)
ELT-AVIATION
RACKMOUNT POWER SUPPLIES
MARINE BATTERY CHARGERS
CONVERTERS - 110 OR 22OV DC TO
12-24-32V DC
OPEN FRAME POWER SUPPLIES

KE Electronics Limited

Manufacturers of electronic equipment for land, marine and aviation applications.
150 Bluewater Road, Bedford, Nova Scotia, Canada B4B 1G9
Telephone (902) 835-7268 Telex 019-21779

# BUILDING BETTER COMMUNICATIONS TERMINALS

If your company owns or plans to purchase an IBM or any host computer that supports either the BSC or SNA/SDLC protocols, Comterm has

good news for you. Just a decade ago, our product line consisted of a single piece of equipment - a remote batch terminal. We put in a lot of effort to make it right. It worked. The market was ready and so were we. Since then, our story has been a series of major challenges and successes. As technology evolved, the market became more sophisticated and more demanding, Comterm engineers went back to the drawing board and came out with the right equipment every time.

Today, our family of equipment consists of color and monochrome display stations, printers, multiplexers, small and large remote cluster controllers, and the

list is growing. But this is only part of the story. Comterm's steady and rapid growth has been built on solid ground. Strong emphasis on latest technology, high quality, performance and dependability ensures savings and flexibility to our clients. Last but not least, when maintenance and repair are required, our service network across Canada will ensure rapid return of equipment to service. Comterm also services its equipment worldwide through trained authorized representatives and independent distributors.

Call us today for a demonstration.



Comterm 545 Delmar Avenue Pointe Claire (Québec) H9R 4A7 (514) 694-3030 TLX: 05-821812 43 Egünton Ave. East Suite 402 Toronto, Ontario M4P 1A3 (416) 481-4467

3555, ouest boul. Hamei Suite 160 Ville Les Saules (Québec) G2E 266 (418) 871-5877 T) Y-051-31531 1184 W. 6th Avenue Suite 101 Vancouver (B.C.) V6J 4N1 (604) 738-6856 TLX: 04-51250 500 Beaverbrook Ct. Fredericton (N.B.) E3B 5X4 (506) 454-8953 TLX: 014-46208

# GL 2020 UNIVERSAL IMTS/MTS/2805 RADIO TELEPHONE CONTROL HEAD

Following in the tradition of the popular GL2000, Glenayre's new GL2020 advances the car telephone to new heights and maintains the Glenayre stamp of quality.

For complete information on the GL2020 IMTS/MTS/2805 control head contact (604) 980-6041



1551 COLUMBIA STREET NORTH VANCOUVER, B.C. CANADA V7J 1A3





To Find Out
About the
Canadian
Electronics
Industry Read

CANADIAN ELECTRONICS ENGINEERING

Canada's monthly electronics magazine

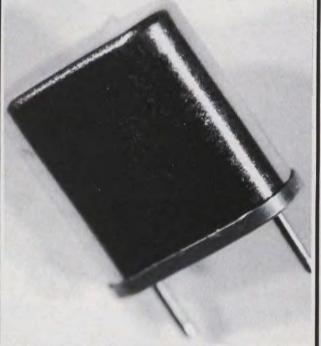


For further information contact the Publisher at 481 University Avenue, Toronto Canada M5W 1A7 (416) 596-5729



A Maclean Hunte

# QUALITY CRYSTALS... ON TIME... AND AT A COMPETITIVE PRICE!

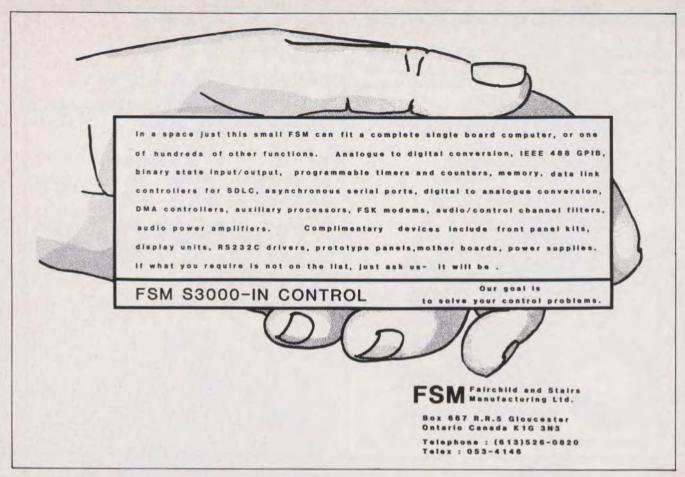


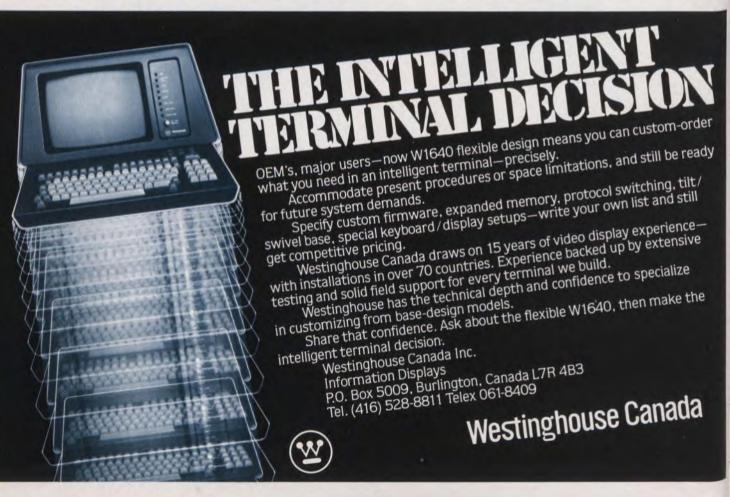
We specialize in low temperature co-efficient AT cuts from 1 MHz to 200 MHz and they're made in Canada.

For fast personal service, call or write Bob Nichols at CTS Canada Ltd., 80 Thomas St. Streetsville, Ont. (416) 826-1141.

CTS OF CANADA LTD.
Streetsville, Ontario







ti

ca



# Here today, there tomorrow.

Gandalf, one of the world's most respected manufacturers of data communications equipment, excels in providing innovative and cost effective solutions to real world data communications problems from manufacturing facilities in Canada, the United States and England. Our product lines include:

- local data sets
- switched and private line modems
- radioModem
- videotext modems
- statistical multiplexers
- X.25 network multiplexers
- TDM multiplexers
- PACX contention switching systems
- interface converters
- data test sets

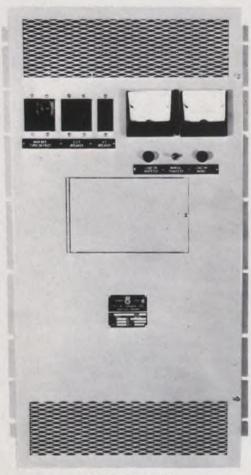
Our products are sold through representative offices around the world. In Europe, our distributors are established in Austria, Belgium, Denmark, England, France, Germany, Greece, Holland, Ireland, Italy, Sweden and Switzerland. Elsewhere, representatives are located in Australia, Hong Kong, India, Japan, Malaysia, Saudi Arabia, Singapore and South Africa.

For the name and number of your nearest Gandalf representative, send a telex to:

## gandalf

Wade Frembd, Marketing Manager Gandalf Data Limited 9 Slack Road, Ottawa, Ontario K2G 0B7 053-4728 or call (613) 225-0565 - a subsidiary of Gandalf Technologies Inc.

# PROVIDES AC POWER



Static Inverters

# CONTINUOUSLY DEPENDABLY

Over 4 million VA Static Inverter capacity produced by CTS since 1960. CTS Static Inverters can be found in attended and unattended installations where fail-safe AC power and maintenance free operation are required.

- Widest range of capacities 250VA to 200KVA single or 3-phase.
- · Employs SCR switching.
- · High order of voltage and frequency stability.
- · Sine wave output low harmonic distortion.
- · Modular construction.
- · Completely static quiet operation.
- Standard designs for input voltages from 24VDC to 260VDC.
- Instant start 50 to 100 ms to pick up load.

Widest selection of rectifiers and accessories for complete power systems. Write for complete technical data.



APPROVED - DESIGNED and MADE IN CANADA



CTS OF CANADA, LTD.
STREETSVILLE, ONTARIO . phone: TORONTO (416) 826-1141

Principal Products Variable Resistors • Selector Switches • Trimming Potentiometers • Photoelectric Controls • Rectifiers • Inverters • Microminiature Components and Circuit Packages

# SYSTEM 3100

Unique features as rare and distinctive as a blue rose

The legendary Sky Blue Rose (Rosa Azura), by far the rarest of the Rosaceae family. Its dignity, refinement and unique characteristics have so captivated man's imagination that since time immemorial the Sky Blue has symbolized Perfection.

As great a rarity in business communications is the unique combination of features SYSTEM 3100 embodies. The most advanced features available today. As broad and inspiring in scope as the blue of the sky. A revolutionary business communications system that has blossomed to its highest form with the most advanced key system and PABX features.

With ITT's flexible, electronic

SYSTEM 3100, you can tailor your system for maximum productivity. Each phone can be programmed in seconds with exactly the right features for each individual user.

SYSTEM 3100 is microprocessor controlled, representing the leading edge in technology.

Modular design affords total flexibility. The system grows as you grow for unparalleled cost efficiency. At each stage you pay only for what you need — no more — no less. And it doesn't require a lot of valuable floor space, taking less room than a file cabinet.

So, free
yourself
from the
strictures of
inflexibility. Contact
your local telephone
company or call ITT
(519) 821-2000, for the name of

your nearest distributor. They'll explain how everything

can come up roses for you with the full array of SYSTEM 3100 features.

ITT

ITT Industries of Canada Ltd. Communications Division Guelph, Ontario, Canada N1H 1A1

# DESIGNS BY GRAPHIC COMPUTER



Whatever your designs,
Orcatech's Graphic Computer
System can probably do it better
and more efficiently. Printed circuit boards or microcircuit layouts, engineering or production
drawings, architectural plans or
public works. Orcatech has:

- Systems that can function as stand-alone intelligent terminals or as powerful front end processors to your host mainframe.
- cessors to your host mainframe.

  Systems with high speed raster graphics, monochrome and color, having 1024² viewable and 64,000² virtual resolution.

- Systems with a high speed, multiprocessor architecture.
- Systems with a full software development and run-time support environment, including Fortran compiler and high level graphics/Siggraph Core implementation.

Orcatech. The Canadian leader in high performance computer graphic systems. Used by some of the largest computer and telecommunications companies in the world. Let us give you all the details on how to improve your designs.

# ORCATECH

Orcatech Inc. 2680 Queensview Drive Ottawa Canada K2B 8H6 Telephone (613) 820-9602

Orcatech Corporation 3250 Ocean Park Boulevard Santa Monica California 90405 Telephone (213) 452-2283

Sales offices in United Kingdom, France, W. Germany, Switzerland





In the fast-changing world of telecommunications, Mitel is leading the way-creating a growing family of compact, feature-rich and highly competitive telephone switching systems.

The success of Mitel in building innovative telecommunications systems is based on leading-edge chip technology. Mitel designs and manufactures integrated circuits. And many of them, like the products of the Mitel ISO-CMOS™ process, are state of the art for the industry.

Here is the Mitel Superswitch<sup>™</sup> family:

**The SX-5** A communication system so compact it fits into a briefcase. Six extensions and 2 lines make it the ideal system for very small businesses or even some large homes.

The SX-10<sup>™</sup> and Super 10<sup>™</sup> Technology that speaks for itself—with friendly voice synthesis. The SX-10 and Super 10 handle 16 extensions and 8 lines. The Super 10 has exceptionally high traffic handling capability and is the only communications system with all the switching electronics in one attractive console.

The SX-20™ This is the Superswitch that lets any business afford and enjoy the features normally available only in large communications systems. It serves 48 extensions/12 trunks or 72 extensions/8 trunks. Just a few of its sophisticated features are call distribution, automatic recall, call forwarding, paging, automatic callback and control of long-distance calls.

The SX-200<sup>™</sup>/100<sup>™</sup>. These are the most compact full-capability PABX's in the world. The SX-200 services up to 160 extensions and 24 trunks. Like all Superswitches, the SX-200/100 are designed to save work, space, energy and money and they have all the benefits of flexible, easy-to-customize software.

**And next...**Soon, Mitel will launch a new generation of digital switching systems that will truly change the way things work in the world of electronic communications.

For more information, contact your telephone company, telecommunications consultant or write to:

MITEL CORPORATION, 350 Leggett Drive, P.O. Box 13089, Kanata, Ontario K2K 1X3 Telephone: 592-2122 TWX: 610-562-8529

TM Trademark of Mitel Corporation © Copyright 1981 Mitel Corporation

# BUILDING BETTER COMMUNICATIONS

