

THE GRS COMPANIES

**General Railway Signal Company
Rochester, New York**

**Cardion Electronics, Inc.
Westbury, New York**

**Budelman Electronics Corporation
Stamford, Connecticut**

**Electrons, Inc.
Newark, New Jersey**

**The Regina Corporation
Rahway, New Jersey**

GENERAL RAILWAY SIGNAL COMPANY

For well over half a century, the General Railway Signal Company has been a leader in railway signaling and communications. The inventor of Centralized Traffic Control, GRS was first to develop an electronic cTc system. A pioneer in pushbutton freight car classification, General Railway Signal Company was first to utilize radar and electronic computer techniques in freight yard automation, first to adapt ferrite core memory systems to yard operations, first to supply transistor-operated cab signals, and holds the basic patent covering electronic gating for hotbox detectors.

Because of the ever increasing use of railway signaling as a means of obtaining efficient train operation, there has been an accelerated growth in signaling research. As a result, GRS has greatly expanded its engineering and research facilities. It has modern and fully equipped chemical, electrical, electronic, metallurgical, mechanical, photometric, physical, and X-ray laboratories manned by qualified engineers and technical personnel. The physical and mechanical laboratories, in particular, are fully equipped with physical testing equipment, including refrigeration equipment for hot and cold tests.

The Company has large, modern facilities for pattern making, casting, forging, heat treating, plastic moulding, machining, plating, painting, coil winding and impregnation, sheet metal fabrication, assembling, wiring, testing, etc.

Vehicle Traffic Control Division of the General Railway Signal Company

This division designs and manufactures traffic control systems and devices for streets, highways, and off-street parking facilities. The Master Dispatch System, a centralized continuous inventory and control system for fire and police vehicles, was developed by this division. Products include ultrasonic detectors, and traffic analyzing, computing, and control systems for maintaining optimum traffic flow on high-density traffic arteries such as multiple-lane expressways.

Aviation Systems Division of the General Railway Signal Company

This division designs and manufactures systems for control of airway traffic, for airport ground traffic detection and routing, for inter-tower interlocked communications, and for flight and weather data readout and transfer displays.

CARDION ELECTRONICS, INC.

Cardion Electronics, Inc. has its offices, research, and production facilities in a modern plant at Westbury, Long Island, N.Y. Its management and personnel offer technical skills and broad experience in system management.

Cardion's capabilities cover design, development, and production experience in a wide range of electronics activities. Major fields of interest at Cardion include: communications, data processing, meteorology, military equipment, navigation and detection, and radar.

In communications equipment, Cardion skills include work on receivers and transmitters, speech compression systems, pulse time and pulse amplitude modulator systems, microwave relay equipment, frequency shift equipment, and carrier telephone.

In the meteorological field, Cardion has modified and improved a Weather Bureau Doppler Radar and is manufacturing the AN/FPS-68 Meteorological Radar for the U. S. Navy, Bureau of Weapons. Work is also proceeding on an airport wind recording system being developed and produced for the U. S. Weather Bureau.

Cardion data processing experience and interest includes: information retrieval systems, analog computers and digital computers including readouts and digital display generators.

Radar is a major interest area at Cardion. In addition to the work on the Weather Radar, noted above, Cardion capabilities cover a wide range of techniques and knowledge in fixed and mobile ground radar, airborne and shipboard radar, and compact portable radar, and search, height finder, pulse, CW, doppler, and pulse types. Radar signal processing capabilities include experience on Moving Target Indicators (MTI), monopulse, correlation and video processors.

BUDELMAN ELECTRONICS CORPORATION

The Budelman Corporation, located in Stamford, Connecticut, specializes in point-to-point multi-channel radio and wire line communication systems for use by industry, government agencies, and utilities. Products include HF, VHF, and microwave FM and AM transmitters and receivers, duplexers, telephone carrier, radio multiplex, automatic transfer, protector and emergency power panels, voice frequency repeaters, cabinets, and test equipment.

The Budelman standard 250-watt VHF transmitter is used extensively by a large national communication system. BEC multiplex radio terminals are used in military air-transportable global communication centrals as connecting links between receiving and transmitting facilities. These BEC terminals convey intelligence over four one-way multiplex speech channels. One channel conveys 16 teleprinter channels, one is used for voice communication, the third for facsimile, and the fourth is used as an order wire.

Users of Budelman carrier, microwave, and other communications equipment are in every state on the continent as well as in Canada, Venezuela, and Puerto Rico.

ELECTRONS, INC.

Electrons, Inc. has its offices and manufacturing facilities in Newark, New Jersey. Electrons, Inc. specializes in the design and manufacture of hot cathode, gas filled tubes. Their engineers pioneered in the development of especially tough cathode coatings which successfully withstand the heavy ion bombardment encountered in industrial applications of such tubes. Electrons has been issued many basic patents for improvements in commercial tubes, developments which have contributed materially to tube reliability, life, and ease of application.

One of Electrons' most recent developments, "DI-EL-TROL" is a high-current switching system, which provides a precise control over high currents at medium voltage. Using Electrons' newly developed type tube, the "DI-EL-TRON", the "DI-EL-TROL" system is a superior current control for many applications, including electric welding and X ray.

REGINA CORPORATION

The Regina Corporation has its manufacturing plant in Rahway, New Jersey. This corporation has long been among the leading manufacturers of specialized household and commercial cleaning and polishing appliances - lightweight vacuum cleaners, electric floor polishers, and electric floor scrubbers. Regina markets appliances under its own brand names and also manufactures special brands for other distributors.