



## **Controlled Data Recording Systems Inc.**

7210 Clairemont Mesa Blvd. • San Diego, California 92111 • Telephone: (619) 560-1272

C.D.R. Systems designs and manufactures scientific and industrial instrumentation and computer peripherals.

C.D.R. Systems began its operations in San Diego in 1978. From a two-man office in rather modest surroundings, the Company has relocated twice because of growing space requirements.

In 1978, the National Science Foundation together with the Scripps Institute, Sunteck and a multi-national consortium of engineers, scientists, applied physicists and technicians had been attempting to build an instrument which would supply information regarding the environment at the bottom of a deep-hole oil well while drilling. They contacted C.D.R. Systems, Inc. and contracted with this new Company to design and build the instrument. The instrument fits into the pipe sleeve and sits about one foot away from the rotating drill bit. The instrument works up to one mile beneath the earth's surface. It is easy to operate by on-site drilling personnel. C.D.R. Systems designed, built and delivered this instrument within four and a half months.

From this beginning, C.D.R. Systems Inc. has continued to provide contractors with data acquisition and control systems and sub-systems that are designed and built with a quality that meet and surpass the contractor's specifications. C.D.R. Systems Inc. also manufactures a line of computer components for Zenith Data Systems Computers, designed by C.D.R. to enhance C.D.R.'s own in-house design and computing power and capabilities. The 9 year history of C.D.R.'s work in both contracted instrumentation and computer peripherals is marked by the quality and reliability of C.D.R.'s designs. C.D.R. has also developed a reputation for strong support of its products and services.

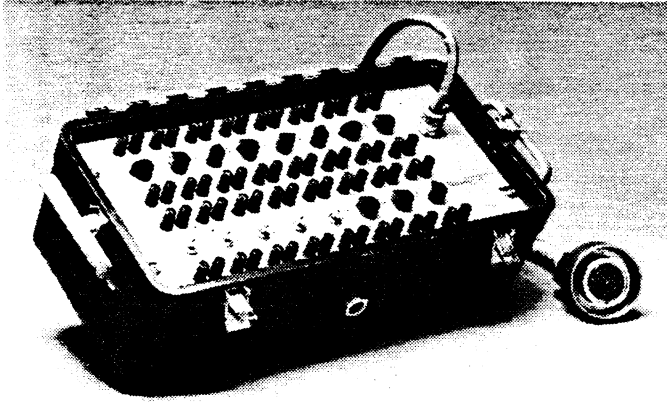
The invisible thread which unites all of C.D.R.'s products is that they are designed to control information. Whether it is the physical motion of the drill head of the world's deepest oil well, the magazine flow rate of the country's most sophisticated tank, or electrical signals within computers, C.D.R. provides unique and innovative means of controlling information.

The technology created by C.D.R. has enabled the company to successfully compete against Honeywell, Boeing and others in bidding for contracts with the government, industry and institutions. C.D.R. has also provided the winning edge when used as a subcontractor for such companies as Systems Development Corp and Ford Aero Space. C.D.R.'s products may be found around the world as far away as the northernmost reaches of Canada controlling critical uninterrupted power supply (UPS) systems, on scientific research vessels (the Glomar Challenger), and as close to home as the Naval Training Center and North Island in San Diego, and the Copley Computer Center in La Jolla in the forms of control equipment and test instrumentation.

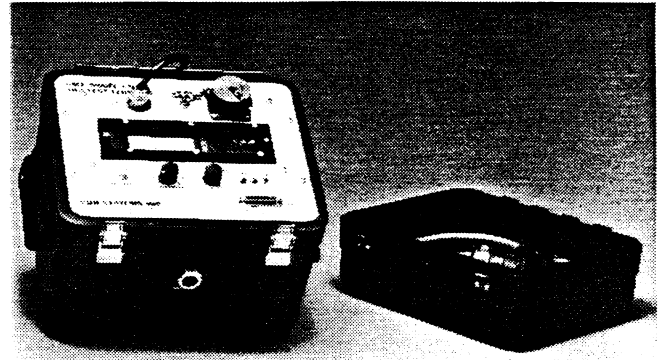
The following pages show a list of technological accomplishments performed by C.D.R. and its founders who have over 35 years of experience in designing data acquisition and control instrumentation. There are also pictures of a few of the instruments designed and built to specification for prime contractors and some instrumentation designed for in-house use which turned into viable products and are sold by C.D.R. through a network of dealers in the computer industry.

Contact C.D.R. Systems Inc. with your research, design, proto-typing, and manufacturing needs.

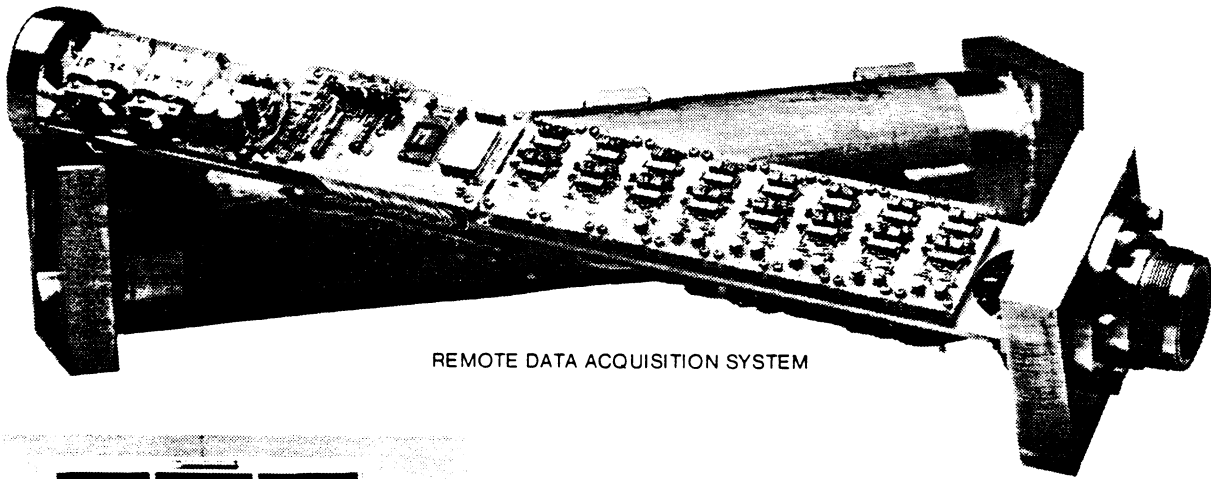
# INSTRUMENTATION



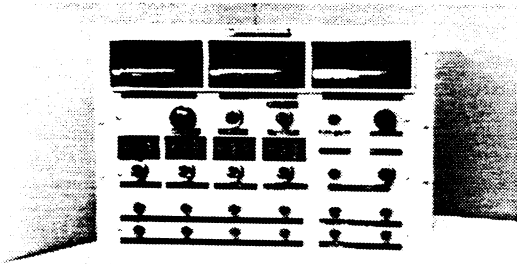
HARSH ENVIRONMENT SIMULATOR



INFORMATION INTERFACE  
AND TEST INSTRUMENT



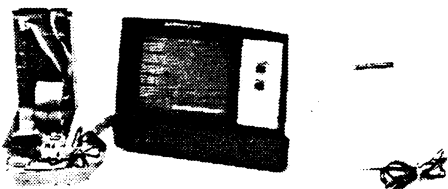
REMOTE DATA ACQUISITION SYSTEM



INDUSTRIAL CONTROLLER



INDUSTRIAL INFORMATION SYSTEM



INDUSTRIAL DATA ACQUISITION SYSTEM



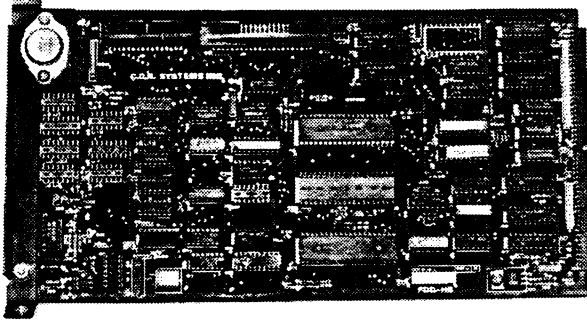
**Controlled Data Recording Systems Inc.**

7210 Clairemont Mesa Blvd. • San Diego, California 92111 • Telephone: (619) 560-1272

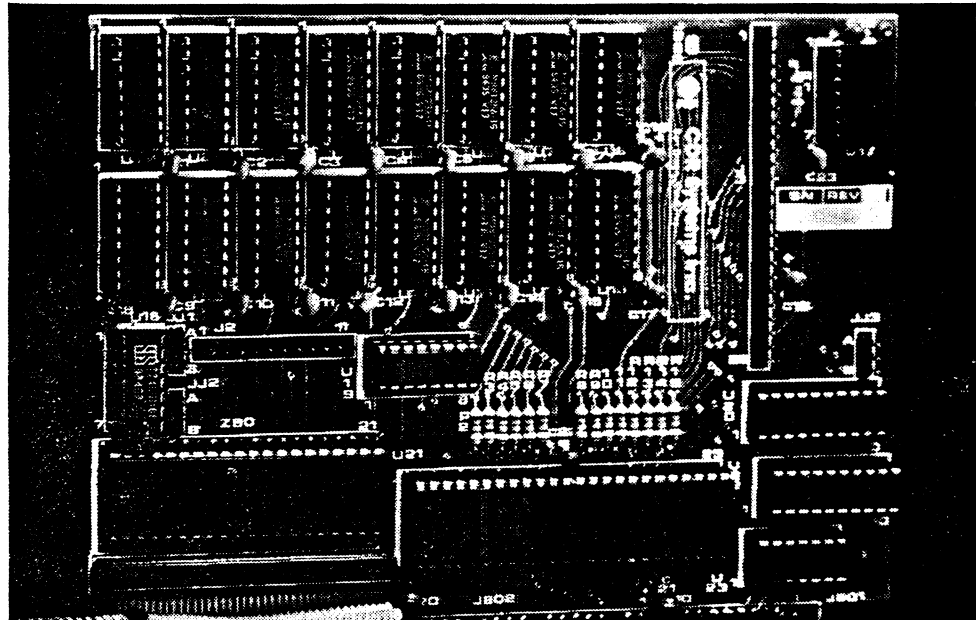
## TECHNOLOGICAL ACCOMPLISHMENTS

- \* Solid state recorders for harsh environments:
  - Drill bit motion indicators 100 C, 10,000'
  - Instrumented pipe joints 100 C, 10,000'
  - Instrumented riser joints 70 C, 15,000'
- \* Scintillation recorders - Helicopter mounted
- \* Controllers for floppy disc systems
- \* Switching systems for multiple mainframe data sharing
- \* Hard disk controllers utilizing Small Computer Systems Interface (SCSI)
- \* Interactive programs developed for the Bureau of Agriculture
- \* Development and sea trials of secure underwater communications systems used on submarines (SESCO)
- \* Micro computer based multiple point data loggers featuring remote control and communication
- \* Intelligent printers for test stations (DOD)
- \* Cartridge drive controllers for remote interfaces
- \* The first industrial data logger using a microprocessor
- \* Intelligent peripherals using a second generation microprocessor for CRT display
- \* Long distance digital communication system to allow remote data acquisition, display and control.
- \* Optical servo system for suspending a single micro particle (Winner of an IR-100 design award)
- \* A/D converter (10 bit dual slope)
- \* Obtained over five patents in the optical servo/micro particle suspension area
- \* Fail safe comparator for on-board aircraft computers
- \* Fail safe rudder position sensor and altitude warning systems for Boeing 747
- \* High speed fast response electrohydraulic winch control system used by U. S. Navy for ship to ship missile loading
- \* Designed and developed the rotation and go-around computer for use on the C-141 aircraft
- \* Designed and developed extensive failure detection and component monitoring features for the go-around computer
- \* Designed and developed a phase computer accurate to 0.02% for use on the Mohole Project
- \* Positioning controls for large drilling barges (Mohole Project)
- \* Servoed probe temperature control system
- \* Digital integrator
- \* Field effect transistor electrometer
- \* Several high power constant current/voltage power supplies
- \* Obtained patent on Hydrogen absorption detector for use on Atomic piles
- \* Analog control systems, C-141 aircraft (USAF)
- \* FAST System (USN)
- \* Digital Control Systems (USN)
- \* Secure Underwater Communication Systems-HUSH Program (USN)
- \* Signal Processing Systems, ASROC Program (USN)
- \* Digital True RMS Voltmeter
- \* Vocodar, Radar Frequency Pulse Communications System
- \* Core memory for digital computer-HUSH Program (USN)
- \* Servoed temperature control for instrument probes
- \* Automatic test equipment for semi-conductors
- \* Radar fire control tracker development, MK 51 (USN)
- \* Aircraft instrumentation system installation
- \* Participated in failure analysis, IBM 360
- \* Performed applications research for High-Speed Data Communications over 10,000 feet utilizing coaxial cables for Shell Oil

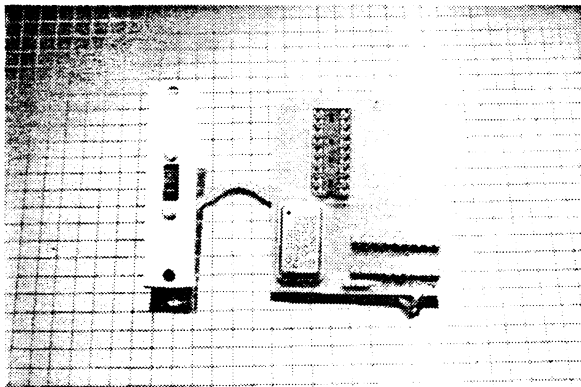
# COMPUTER PRODUCTS



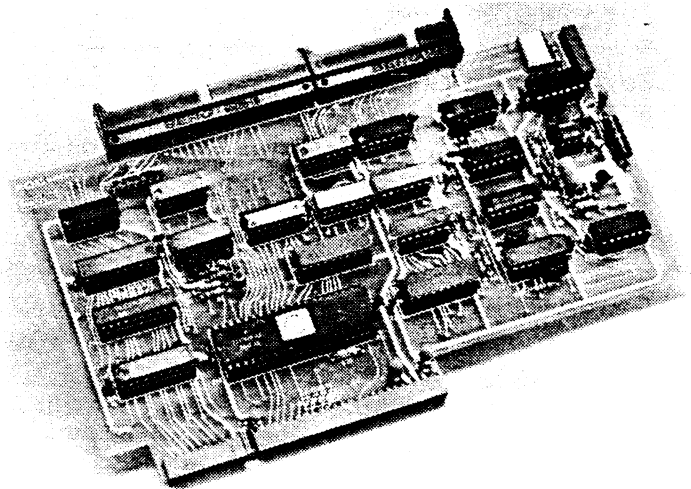
FDC-H8 DOUBLE DENSITY DMA CONTROLLER  
(For 8" & 5.25" Drives)



SUPER RAM 89  
(For H/Z89-90 Computer)



ZS100 SPEED MODULE  
(Speed Module For Z100)



FDC-880H DOUBLE DENSITY CONTROLLER  
(For 8" & 5.25" Drives)



**Controlled Data Recording Systems Inc.**

7210 Clairemont Mesa Blvd. • San Diego, California 92111 • Telephone: (619) 560-1272