

*MACKENZIE*

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REPETITIVE AUDIO/VIDEO/DATA FOR BUSINESS AND INDUSTRY

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***MAKING A DIFFERENCE, ONE AT A TIME***

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CORPORATE PROFILE

*MACKENZIE*



## CORPORATE RESOURCES

Mackenzie's 21,000 square-foot corporate headquarters and manufacturing plant is located in Glendora, California, USA, just 30 miles east of downtown Los Angeles. The two-story facility, specifically built for and owned by Mackenzie.

## MESSAGE FROM THE PRESIDENT

We at Mackenzie Laboratories, Inc. are proud of our rich history of providing high-quality products and utilizing leading-edge technology, to deliver and enhance methods of repetitive communication. Development and manufacture of innovative solutions to meet and exceed customer, industry and product needs is reflected in our mission: Making a Difference, One at a Time. We are committed to making a difference for you!



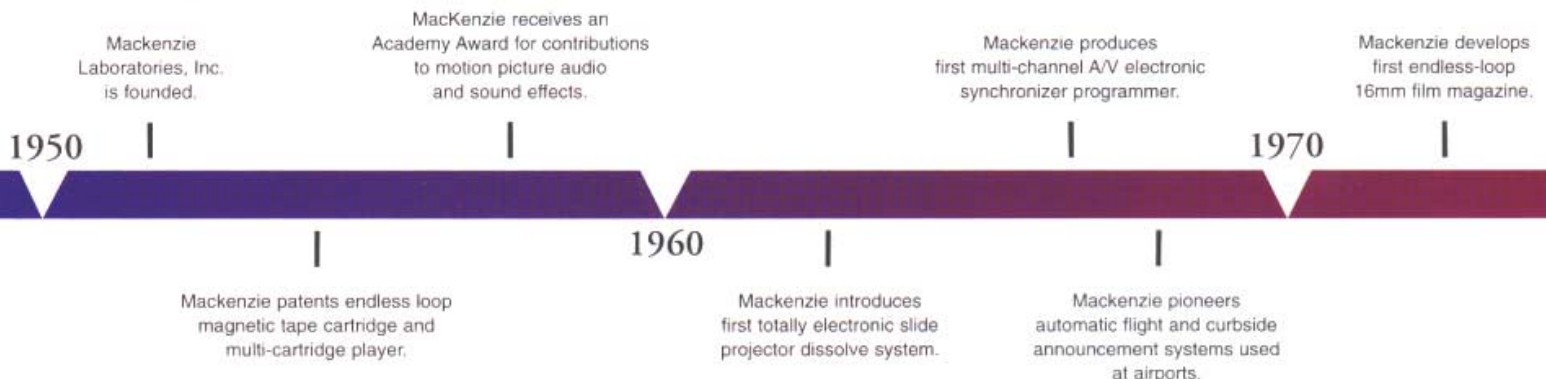
*Advanced features and functions in a cost effective package.*

Mackenzie supports a full engineering staff to turn ideas into products. Capabilities include; system planning, hardware design, software design (application and firmware), component selection and system integration. Our fully integrated CAD/CAM system expedites printed circuit board design and production.

Mackenzie's manufacturing/purchasing organization is all about quality. We offer components acquisition, electronic assembly, mechanical assembly, system integration, in-house sheet metal fabrication, test and quality control. Since internal resources are geared toward short run production, strategic alliances are in place for large volume assembly and component warehousing.

Mackenzie sales and marketing, knowledge is power. Our sales staff is comprised of seasoned veterans of the messaging and related electronics businesses. We can relate to your business, offer unique perspective based in industry experience and exceptional customer service.

## MACKENZIE AWARDS, CONTRIBUTIONS, AND MILESTONES





Advancing the industry with remote communication.

### TECHNOLOGY INITIATIVES

We all know that innovation requires a great deal of engineering and market development resources. This cycle has proven particularly difficult due to the fact that technology is constantly changing. Through OEM and standard developments, we have gained expertise in many areas including, micro-controllers/processing, digital audio, digital video, memory storage, communications, and the list goes on. This experience serves as the platform for turning ideas into products and getting them to market quickly.

### CORE AREAS OF EXPERTISE

#### *Hardware/Software Control*

- ▶ Simple single bit thru 32 bit central processing units (CPU)
- ▶ Real Time Operating Systems (RTOS)
- ▶ C, C++, Delphi and Assembly languages
- ▶ Programmable logic devices

#### *Storage*

- ▶ Hot Pluggable PCMCIA/ATA
- ▶ IDE
- ▶ Embedded Flash

#### *Communications*

- ▶ Serial
- ▶ Parallel
- ▶ Ethernet
- ▶ GPS, WWVB
- ▶ USB
- ▶ IEEE 1394 (Firewire)
- ▶ Contact closure
- ▶ Relay

#### *Standards*

- ▶ ADPCM
- ▶ MPEG Audio and Video
- ▶ Linear PCM

#### *Packaging*

- ▶ Sheet metal fabrication
- ▶ Aluminum, formed and extrusion
- ▶ Injection molded plastic

Mackenzie produces first affordable all digital message repeater for the amusement and entertainment industries.

Mackenzie introduces first practical digital feedback eliminator and auto-page repeater.

Mackenzie Annunciators utilized by metropolitan mass transit systems.

Mackenzie develops OEM solutions for satellite messaging, transit announcements and amusement rides.

1990

1980

2000

Mackenzie introduces revolutionary Z-Mac board room control system.

Mackenzie develops first UL recognized digital sound system for fire alarms and life safety application.

Mackenzie introduces DYNAVOX line of digital Message On Hold and Storecasting systems.

Mackenzie launches TDS-2000 digital download messaging system.

## STANDARD MARKETS

For over forty years Mackenzie has sought out unique niches for our products. In many cases, we have become the standard in the market. The following are areas which we offer standard Mackenzie brand product. This is by no means a limit to the extent of our product capabilities as over half of our business comes from OEM products.

### *Message On Hold/Storecasting -*

Mackenzie's full line of digital Message-On-Hold systems turn your telephone into a powerful marketing tool. Systems offer maintenance free digital playback with tape, modem or satellite download. Several varieties are available with advanced features such as Music-Thru, individual message enable/disable, message sequencing, night answer and in-store broadcasting.

### *Digital Message Repeaters -*

Mackenzie's line of Digital Message repeaters are the ideal audio and video solutions for Information, Amusement, Entertainment, Museum and Exhibit applications. Self contained solid state systems offer unparalleled reliability. A variety of channel, connection, bandwidth and memory configurations are available.

### *Page Stacker/Feedback Eliminator -*

Mackenzie's FE series of Digital Page Stacker/ Repeater and Feedback Eliminators offer advanced features for the most difficult paging and intercom applications. A unique design makes feedback virtually impossible by recording then repeating pages which opens the loop between the input microphone and speakers. Various models are available to support simple repetition, multiple page stacking and multiple input channels.

## **Mackenzie Laboratories, Inc.**

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