Reliable® controls

Q4 - 2006

THE trend

THE OFFICIAL QUARTERLY NEWSLETTER OF RELIABLE CONTROLS® CORPORATION

UL864 **Certified**

Reliable Controls® is pleased to announce UL864 certification.

Underwriters Laboratories Inc.®

1986 - 2006 20 YEARS OF EXCELLENCE Reliable controls

120 Hallowell Road · Victoria · BC · V9A 7K2 · Phone · 250 475-2036 · Fax · 250 475-2096 · www.reliablecontrols.com · Order Fax Number · 250 475-2026

Underwriters Laboratories Inc.®

UL864 **CERTIFICATION**

UL864 certification allows Reliable Controls® products to be used to control the flow of fire-based smoke within a building. As many new large project specifications require that building controllers offer certified smoke control, UL864 certification allows Reliable Controls® to gain market share in large building projects.

The following Reliable Controls® products are certified for smoke control under #UUKL.S8876: MACH-Global™ (MG, MGX-I, and MGX-O), MACH-Air™, MACH-Zone™, MACH1™, MACH2™, and MACH2X™.

Smoke control listed product will be sold under a new product category starting in February of 2007. A new Category -S section will appear in the 2007 Price List. There will be new part numbers for all controllers that bear the UL864 marking. Part numbers are: MG-SMK, MGX-I-SMK, MGX-O-SMK, M1-SMK, M2-SMK, M2X-SMK, MAH-SMK, MZ-4T-SMK, MZ-RT-SMK.

The Underwriters Labratory is the trusted source across the globe for product compliance. Benefiting a range of customers, from manufacturers and retailers to consumers and regulating bodies, UL has tested products for public safety for more than a century.

BACnet | TESTING | LABORATORIES

BTL INTEROP-WORKSHOP VANCOUVER 2006

INTEROP-WORKSHOP

October 2 - 3 BTL - Working Group | October 3 - 5 Interoperability Workshop

Reliable Controls® co-hosted the seventh annual BACnet Testing Laboratories (BTL) International Interoperability Workshop held at the *Radisson President Hotel & Suites Vancouver Airport* in Richmond, British Columbia, Canada. The BTL Interoperability Workshop permits vendors to test their BACnet® products in a neutral and friendly environment with BACnet® devices from other vendors. Over 100 BACnet® engineers representing 27 companies annually attended the Interop Workshop to improve their implementation of BACnet® and testing methods.

Reliable Controls® products tested in the round-table testing included the new MACH-ProCom™, the MACH-Stat™, and the MACH2™ Rev G. Two teams of four Research and Development personnel represented Reliable Controls® at this year's event, and Reliable Controls® personnel also participated in the BTL Working Group discussions.

www.bacnetinternational.org

MACH-STAT™ WINS BTL LISTING

The MACH-Stat™ and MACH-Stat-ND™ are now listed with the BACnet Testing Laboratories (BTL) as BACnet Advanced Application Controllers (B-AAC). This level of capability allows the controller to *initiate* requests for information as well as respond to requests from other controllers. The BTL mark will appear on the inside backplate of MACH-Stat™ controllers that ship with firmware 6.56, or higher.

BACnet TESTING LABORATORY BTL™

New Training Facility

As a part of the recent renovations of the corporate headquarters in Victoria, British Columbia, the new Reliable Controls® training facility can accommodate up to 12 students comfortably and offers a spacious learning environment.

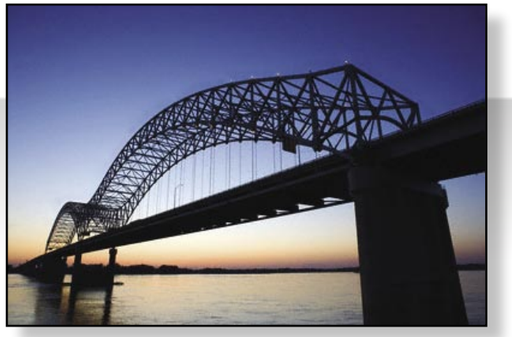
Contact your **Regional Sales Manager** for Customer Training dates and availablity.

Along with training for Reliable Controls® Authorized Dealers, we also offer a two-day Customer Training course which is ideal for business owners, building managers, and facility operators. Although having some computer and controls experience would be of benefit, the Customer Training course is designed to accommodate the novice who has little or no experience. If you would like to receive registration information for Customer Training, please complete our online registration form. If you have any questions regarding our Customer Training, please feel free to email training@reliablecontrols.com.

Curriculum

Day 1	08:30 - 10:00	Introduction to the Reliable Controls MACH-System (PPP)
	10:00 - 11:30	Web-Based Training Module - Controllers
	11:30 - 12:00	Point Types and Descriptors (Point Mnemonics)
	12:00 - 13:00	Lunch
	13:00 - 14:30	Exercise #1 – Engineering a System
	14:30 - 17:00	Exercise #2 – Program the Point Database
Day 2	08:30 - 11:00	Exercise #3 – Annotate and Linking Graphics
	11:00 - 12:00	Integrating BACnet Objects
	12:00 - 13:00	Lunch
	13:00 - 14:00	The Control BASIC Editor
	14:00 - 16:30	Exercise #4 – Programming with Control BASIC
	16:30 - 17:00	Free Time – Discussion

New Midwest Regional Sales Manager



Reliable Controls® is pleased to announce that Rick Rosine has been selected for the position of Midwest USA Regional Sales Manager. Rick has had a long career in the building controls industry. After entering the industry in 1986 as a Control Technician for Bloomer Mechanical, Rick transitioned to an Application Engineer for Honeywell in 1992 and then moved up to become the Vice President of Engineering for Commercial Controls Services (CCS) in 1998. Rick has the ideal skill-set for understanding the concerns of new dealers who are switching to an alternative controls product. Rick officially starts at Reliable Controls® on January 01, 2007 at which time Rick's mandate will be to focus on making the case to switch to Reliable Controls® for many companies in the 20 states that comprise the new Midwest region in the Mississippi River basin.

The new MACH-Pro™ Series

Reliable Controls® takes the building controller to new heights.

The first in a new series of sleek, powerful and durable 32-bit devices, the Reliable Controls MACH-ProCom™ provides unprecedented value in a high performance, scalable building controller.

The MACH-Pro™ Series empowers you to achieve your goals.

Quality

Designed entirely in-house, by a team of highly skilled and dedicated engineers the MACH-Pro™ Series is the culmination of 20 years of innovation excellence.

Freedom

Enjoy the freedom of choice. Choose from a pool of open protocols, and build a network architecture that best fits your way of thinking. The MACH-Pro™ Series gives you the freedom to change protocol whenever you want, wherever you want.

Confidence

Expand your building controls with confidence. The MACH-Pro™ Series is backed by an industry-best, no-nonsense, 5-year warranty. Sold and serviced through a strong network of independent Reliable Controls Authorized Dealers, we are dedicated to helping you succeed.

ColdFire
[32-bit]

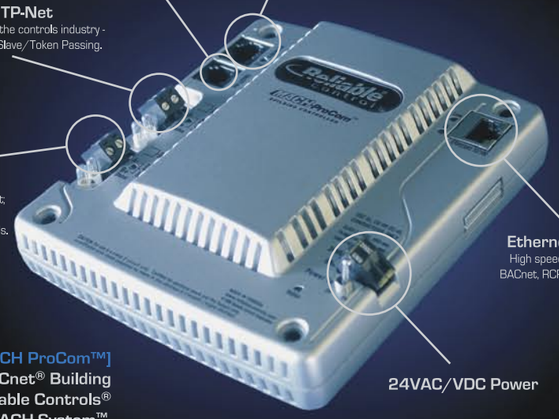
Powered by Freescale's, 32-bit, RISC ColdFire microcontroller.

PC/Modem
Simple and dependable serial communications.

SMART-Net
Network SMART-Sensors™ together and pickup temperature, setpoint and occupancy values from individual spaces.

MS/TP-Net
The workhorse of the controls industry - BACnet Master Slave/Token Passing.

AUX-Net
Unprecedented flexibility. Choose any one of three powerful network configurations: a second MS/TP-Net; Modbus RTU-Net; or I/O-Net for connecting up to eight versatile MACH-ProPoint™ I/O expansion cards.



Ethernet 10/100
High speed connectivity for BACnet, RCP, SMP and SNMP.

24VAC/VDC Power

[MACH ProCom™]
A powerful, 32-bit BACnet® Building Controller for the Reliable Controls® MACH-System™.

www.reliablecontrols.com

MACH-ProCom™ BUILDING CONTROLLER

Better by design

5 year Warranty

BACnet International

1985 — 2005 20 years of reliance Reliable

Reliable® controls

people and technology you can rely on™

PACIFIC RIM REPORT

Korea

Reliable Controls® has a new Authorized Dealer in Seoul, Korea - Jireh IBS Co. The principals of Jireh have a long history in the intelligent building systems industry, and recently sought out Reliable Controls® to secure an independent line of controls in a bid to depart from their role as a subdealer with ALC. Jireh has a staff of six highly-skilled, technical employees, of which Mr. Kang (president) and Ms. Park (secretary) demonstrate leadership by *walking-the-talk*. Both are very much *hands-on-the-technology* managers.

Jireh's business plan focuses primarily on Energy Services Contracting (ESCO). Commonplace in Seoul are large central heating and cooling plants with gas-fire electric generators to supply comfort and electricity to large apartment complexes. The apartment complex typically comprises of 10–20 highrise buildings that form a ring around a centrally located parkade. Below the parkade is the central plant. Jireh specializes in optimizing the efficient operation of such plants, often using heat-recovery from the gas-fired generators to offset boiler fuel. Remote monitoring of these unmanned plants is typically done over the Internet.

Seoul is a bustling, highly organized city of 10 million people. Traffic, although congested, consists of drivers who are for the most part patient and respectful of the rules of the road. The domestic auto industry has done well in Korea. Samsung, Hyundai, and Kia manufacture the vast majority of automobiles. In addition to cars, trucks and busses, these enormous conglomerates, along with LG, SK and Lotte, manufacture a vast array of value-added products; from electronic chips to potato chips, from appliances to apartment buildings. Despite its proximity to the concerns North Korea, Seoul has a strong and stable economy. Its burgeoning middle class is hardworking, focused, and polite, and the country is putting a solid foot forward to raise the standard of living.

Taiwan

Lucon Automation Co., of Taipei, Taiwan, has been a committed and successful Reliable Controls® Authorized Dealer since 1999. Managed by Mr. John Chen (lower left) and Ming-Ta Shih, the company is service-oriented with its primary focus on large, high-profile projects.

Both John and Ming-Ta have Masters Degrees in Controls Automation, and Ming-Ta is currently working towards a Ph.D. In 1981, while working for Sauter, John Chen installed the first building automation system in Taiwan for the Taiwan Power Company. Since becoming a dealer, Lucon has retrofitted and expanded the building with Reliable Controls®. The Taiwan Power Company Headquarters in Taipei now consists of over 5,700 points of measurement and control using the Reliable Controls® MACH-System.

In a nearby region of the city stands the Ta-Pin-Lin Emergency Response Headquarters (upper right). With 17 stories of office space and 3 levels of parking, this large facility accommodates many important government offices including: National Fire Agency, National Airborne Service Corps, National Disaster Reduction Center, Central Emergency Operation Center, and others. The control system consists of 7 fully loaded MACH-Global™ controllers, 34 MACH1™ controllers, and 230 Delta VAV boxes communicating over BACnet MS/TP. A large chiller plant is controlled in the basement of the facility. The plant manufactures ice during the evening, during off-peak electrical periods. The ice is allowed to melt during the normal daytime occupied periods to provide cooling at a minimum cost.

Also in Taipei are the Chiang Kai-shek Memorial Hall, National Theatre (right), and National Concert Hall. These three massive structures collectively span several city blocks, each building hosts a Reliable Controls® MACH-System, installed by Lucon Automation.

Taipei is a warm and humid city of approximately 2.5 million residents, surrounded by beautiful misty green mountains, rivers and ocean. Seafood and shrimp are popular on every menu. The average humidity year round is typically 75%, and each year there is routinely two meters of rainfall, or more.

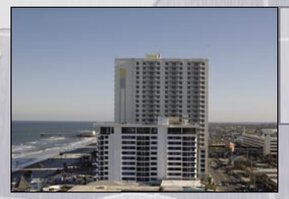
NEW DEALERS

ALLEN TRADING COMPANY
43 Matai St., PO Box 2020, Taupo, New Zealand, 3351
www.atc.net.nz

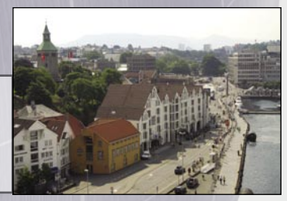
CONTROLS UNLIMITED
1013 Hodgkins Street #F, Houston, Texas, USA, 77032

CULLODEN AUTOMATION
11-83 Bigwin Road, Hamilton, Ontario, Canada, L8W 3R3

ENERGY MANAGEMENT CONSULTANTS
1550 LaFollette Street, PO Box 81, Fennimore, Wisconson, USA, 53809
www.emccontrols.com



PRECISION AUTOMATION
120 Springwood Drive, Daytona Beach, Florida, USA, 32119



ROGALAND ELEKTRO
Kvitsoygaten 104, PO Box 8110, Stavanger, Norway, 4068
www.rogalandelektro.no

SIMETRI OTOMASYON
Fevzi Cakmak Cad Aydin, Apt. No. 35A/7, Bahcelievler Yayla, Istanbul, Turkey
www.simetriotomasyon.com

SPARK CONTROLES
Rua Fidencio Ramos, 41 Vila Olimpia, Sao Paulo, Brazil, 04551-010
www.sparkcontroles.com

AHR EXPO

Dallas, Texas · January 29–31, 2007
Booth# 1523

To remain competitive, staying on top of the latest technologies and industry standards is essential. At AHR Expo you can take advantage of dozens of educational opportunities that can be a real boost to your business. In response to industry feedback, AHR Expo will introduce several new Show features and enhancements in Dallas, including:

• A variety of association-sponsored educational sessions focusing on energy efficiency and building automation topics will be offered in addition to the ASHRAE conference program and short courses,

• A special focus on Green Buildings featuring “green” exhibitors and new conference sessions by the United States Green Building Council (USGBC),

• The New Product Technology Theater where leading companies will present brief previews of their latest technologies and products, including many dealing with energy efficiency, building automation and Green Buildings,

• An expanded Building Automation & Control Showcase area on the Show floor featuring all of the latest building automation products and technologies, and

• The AHR Expo Innovation Awards Competition will showcase the most innovative new products at the Show including those focused on Building Automation, Indoor Air Quality, and Green Building areas.

“AHR Expo is the only event in the world where HVAC/R professionals can see such a wide selection of new products and technologies and choose from so many educational opportunities. The 2007 Show in Dallas will provide HVAC/R professionals with the information they need to perform their jobs more effectively.”

- Clay Stevens, President of International Exposition Company, Show Producers and Managers.

Project profile

Kamloops Centre for Water Quality

Officially opened in February 2005, the Kamloops Centre for Water Quality is the largest operating facility in North America to use Zenon membrane treatment. Built between March 2003 and December 2004 at a cost of $48.5 million, the current daily treatment capacity of the centre is 160,000 m³. The treatment centre also contains laboratories and classrooms built as part of a research and training partnership between the City of Kamloops, Thompson Rivers University and Zenon Environmental Inc.

The Reliable Controls® MACH-System installed at the facility consists of 2 MACH-Global™ controllers networked to 14 MACH-Air™ VAVs, each hosting its own SMART-Sensor™. The Kamloops Centre for Water Quality features an HVAC system comprised of 12 air-handlers, and numerous exhaust and building pressure dampers located throughout the structure. The main air-handler is dedicated to maintaining the comfort of the offices and training areas. The facility also features radiant flooring, 2 boilers, and 2 heat harvesters.

The Reliable Controls® MACH-System™ installed at the Kamloops Centre for Water Quality helps the facility to produce clean, safe filtered drinking water for the city of Kamloops, 365 days a year.

MACH-Air™ VAV

MACH-Global™ Controller

INDUSTRIAL

Project Name:

Kamloops Centre for Water Quality

Location:

Kamloops, British Columbia, Canada

Market Segment:

Industrial

Project Type:

Chiller, CO_2 Monitoring, HVAC, VAV, Water Filtration

Installation:

New Construction

Total Area:

11,000 m^2 (125,000 ft^2)

Equipment Installed:

2 MACH-Global™
14 MACH-Air™
14 SMART-Sensor™
Building Air Pressure Monitor

Network:

EIA-485

Total System Points:

352 points

Consultant:

Stantec

Authorized Dealer:

Aspen Controls Ltd.

Reliable® controls

...people and technology you can rely on™

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