

Systems & Services Division
Johnson Controls, Inc.

Monitoring The Field

September, 1981
Vol. 25, No. 9

First Completed Tri-Service Spec Jobs are Johnson Controls

Three Johnson Controls JC/84 energy management system installations have passed acceptance tests under the Tri-Service specifications, apparently becoming the first sites to meet the controversial guidelines.

Johnson Controls' test completion this summer at the Naval Air Rework Facility, Alameda Naval Air Station, near San Francisco, was the last of the acceptance tests at three locations under the same \$2.8 million U.S. Navy contract. The Navy previously accepted the Johnson Controls systems at Whidbey Island Naval Air Station, Seattle, and at Miramar Naval Air Station, San Diego.

The Tri-Service spec is the standard used by the armed forces in specifying an energy management system. This spec is also now being used in parts of the commercial market. Johnson Controls' JC/84 systems, designed by our Special Systems Operation in San Diego, are specifically for Tri-Service spec jobs.

DOE Cycle 3 Funding Set at \$168 Million

The latest round of Department of Energy grants will be made available to schools and hospitals in late September and early October. The \$168 million provided by DOE in Cycle 3 of the program must be matched by the receiving institutions, thus representing a \$336 million market.

The program recognizes the potential for energy conservation in schools and hospitals by providing matching funds for energy audits and the resulting retrofit work.

Johnson Controls' completion of the spec jobs is especially significant because the system's technology can also be used by large commercial customers, according to George Futas, director of SSO. He expects about six



more JC/84 jobs to be completed this year. The Whidbey Island site was the primary JC/84 test site. The Seattle branch and Pacific Coast regional office were responsible for engineering and installation. The Navy has publicly praised the system's capability and Johnson Controls' efforts in completing the job.

The Tri-Service spec is soon to become a Federal Standard Specification. The primary impact of the JC/84 is the ability for Johnson Controls to meet this spec by providing a standardized system which is also easily customized to meet the user's special needs.

Because most easy-fix projects were expected to be taken care of in the first two cycles of the grants program, larger scale projects will most likely be the target of current spending.

Since the grant program began in April, 1979, Johnson Controls has been aggressively pursuing this business, with branch activities coordinated through the Federal Energy Programs office in Milwaukee. Although the total may be higher, grant-related sales that have been reported by our branches now total more than \$4 million.



Ban Capron named manager of Southwest

Ban Capron has been selected as the new manager of the Southwest region, based in Dallas, Texas. Ban has been the manager of the Houston branch since 1973. He started with Johnson Controls in 1960 as a sales engineer in the Grand Rapids branch, and transferred to the New York branch in 1965. He served as metropolitan sales manager in New York from 1971 until his transfer to Houston. He received his engineering degree from the University of Illinois in 1958.

Mr. Capron's appointment coincides with the following previously announced management changes:

Bill Braak, vice president, Johnson Controls, Inc., and SSD sales manager, has elected to take a leave of absence from his position on September 30, 1981.

Bruce Ashenfelter, vice president and assistant sales manager of SSD, will become sales manager, effective September 30, 1981.

Harvey Siebert, formerly manager of the Southwest region, has been promoted to vice president of field operations, based in Milwaukee.

Inside this issue

JC/85 Demo Unit, p. 4
Service newsletter, p. 7
Letter to the editor, p. 8

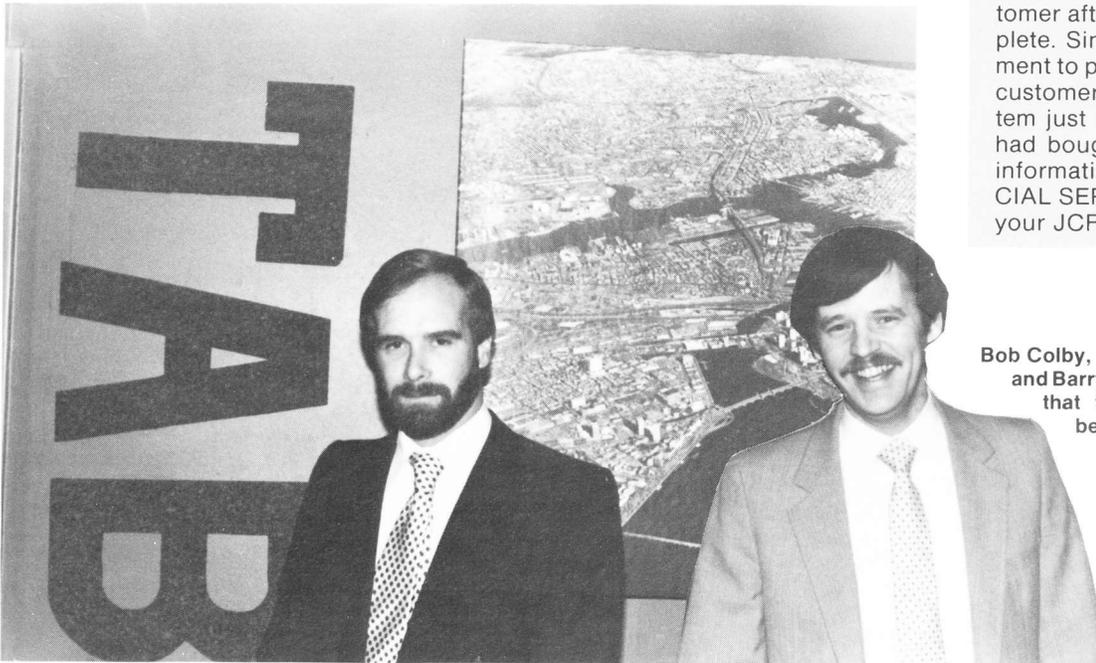
Keeping TABS on Boston

Boston has seen its branch TABS operation (Time-shared Automated Building Service) grow by leaps and bounds since its beginning several years ago. Six new jobs were put on-line in July alone.

Bob Colby, Boston TABS manager, says this about TABS growth in Boston: "We had to prove ourselves and so it was slow at first. It's one thing to sell an idea, but a heck of a lot easier if the idea is a proven one. Several good jobs provided a solid base . . . we then at-

tacked the school market. With their limited resources for proper building operation, the idea of cutting building operating energy expenses was music to school administrators' ears."

Bob attributes much of the current sales boom to the early pioneering efforts of Steve Barvenik, who has since moved on to become the Northeast region's TABS manager. Bob looks for continued rapid TABS growth, particularly in schools.



Buy it on time WITH JCFS

There seems to be a widespread belief that the only function performed by Johnson Controls Financial Services is to *lease* systems. Not true! JCFS also provides a means for customers who want to own a system and buy it on an installment payment basis — much the same as you would buy a car.

Conditional Sales Agreement (CSA) terms are usually 24 to 84 months. Title passes to the customer after the installation is complete. Since the CSA is an agreement to purchase the system, CSA customers can depreciate the system just as they would do if they had bought it outright. For more information, refer to your FINANCIAL SERVICES handbook or call your JCFS representative.

Bob Colby, Boston branch TABS manager, and Barry Fisk, TABS sales engineer, say that total branch cooperation has been a big factor in their success. "Both TABS and Service have benefited from our working together."

First Regional Credit Awards Announced

During the past year, the prime cost of money has fluctuated between 11% and 22%. This situation has resulted in additional costs of doing business for everyone.

"In an attempt to minimize these costs, we have implemented several programs to encourage improved collection performances and give recognition to the successful achievers," said Bob Peck, national credit manager, Milwaukee.

Beginning in 1981, the regional credit department collection performances will be evaluated twice a year, on March 31 and September 30. The recipients of the first awards are the credit staffs in the **Southwest** region for the top regional collection effort, and the **Pacific Coast** region for the most improved performance.



SOUTHWEST REGION: BEST PERFORMANCE From left are, Karen Seay; Steve McWethy, regional credit manager, and Janet Martin.



PACIFIC COAST REGION: MOST IMPROVED From left are, Rachel Dobrow; Jim Wilkie, regional credit manager, and Mary Greer.

Winnipeg: Surviving the mail strike



Lorraine Dacombe and Rosy Lizak keep the cash flowing in Winnipeg

When postal workers in Canada went on strike July 1st, our branches devised ways to keep the cash flowing. In Winnipeg, our branch solved the problem by hiring two students to pick up and deliver checks and bills.

Rosy Lizak (sister of office supervisor Lucy Glabush) and Lorraine Dacombe (daughter of construction superintendent Ed Dacombe) were assigned the job. "They did a great service by helping our cash flow, handling more than 100 pieces of mail in just

two days," said Jack Patterson, branch manager. The two-person team was necessary because many companies were using messenger services, making parking impossible, especially downtown.

Upcoming seminar offers advanced energy technology

A special technical seminar covering the techniques and potential of conserving energy with HVAC control systems will be conducted in Milwaukee during the week of November 9-13, 1981. This is the only time during fiscal 1982 when this seminar will be offered.

"Because of the highly technical nature of this seminar, we would like to limit enrollment to employees with a minimum of two years of experience with Johnson Controls," said Norm Janisse, manager of Field Engineering and Energy Management Systems, who will be one of the principal instructors. Knowledge of the fundamentals of temperature controls and temperature control systems *service* are important.

Refer to section 2.3.2 in sales memo 41-C (9-1-81 to branch managers) for details. Applications for the seminar should be on Form 1178. Regional approval is required.



Rosy and Lorraine started their day with mail to be delivered to customers.

Another Industry First

Standard JC/85/40 Passes Tri-Service Spec

A standard JC/85/40 system from Johnson Controls has been installed at the U.S. Army's Carlisle Barracks in Pennsylvania and accepted ahead of schedule under a modified version of the military's Tri-Service specifications.

Acceptance of the JC/85/40 under the guide specs is significant because the system may be the first standard EMS energy management system product-line offering to meet the military guidelines.

No modifications were required to meet the specs. "The ability to use standard equipment in both hardware and software versus a custom design was largely responsible for the speed of the project" said Neal McGee, manager of our Harrisburg branch office.

Johnson Controls completed the 30-day average acceptance level testing on the JC/85/40 on July 28, more than a week ahead of the August 7 contract date. The system had been operating for three months before that with virtually no downtime.

Monitoring The Field

September, 1981
Vol. 25, No. 9

Published monthly at Milwaukee, WI for employees of the Systems & Services Division, Johnson Controls, Inc.

Managing Editor, Mary Beth McKibbin

Contributing Editors: Joe Bartoletti, TABS; Lou Davit, Installation/Engineering; Dale Hawley, Service; John Levenhagen, Counterline; Patricia Ludwig, BAS; Terry Meinholdt, APS; Bob Stahl, ATC; Diane Wagner, Quality Assurance; Richard Walker, Federal Energy Programs.

Letters may be addressed to the Managing Editor, *Monitoring The Field*, Johnson Controls, P.O. Box 423, Milwaukee, WI 53201.

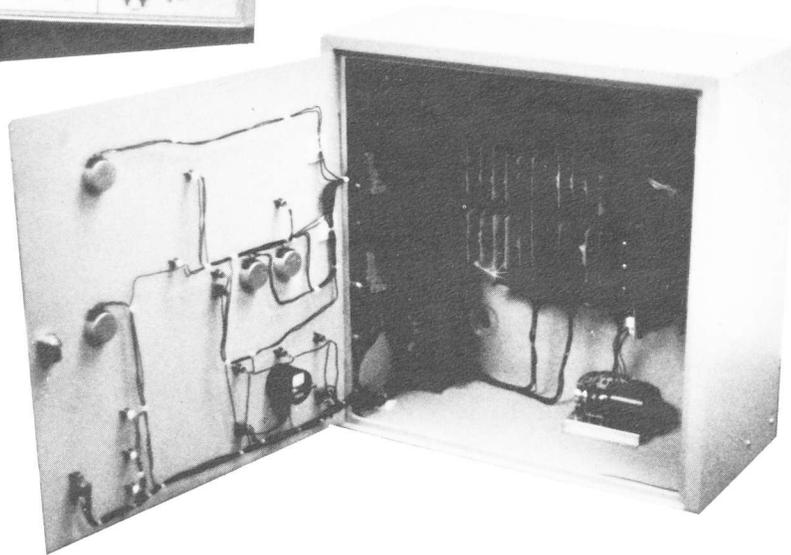
JOHNSON
CONTROLS

Central Region's JC/85 demo unit does it all



If you've been intending to build a JC/85 demonstration unit but didn't know where to begin, this may be the answer.

Keith Sargent, application engineer in the Central regional office in Cleveland, designed and built a demo unit that has been a big hit in the branches. It can be used with either the JC/85/40 or JC/85/10 to demonstrate energy management, load shedding, start/stop, a basic form of fire and security, and typical points in an HVAC air handling unit.

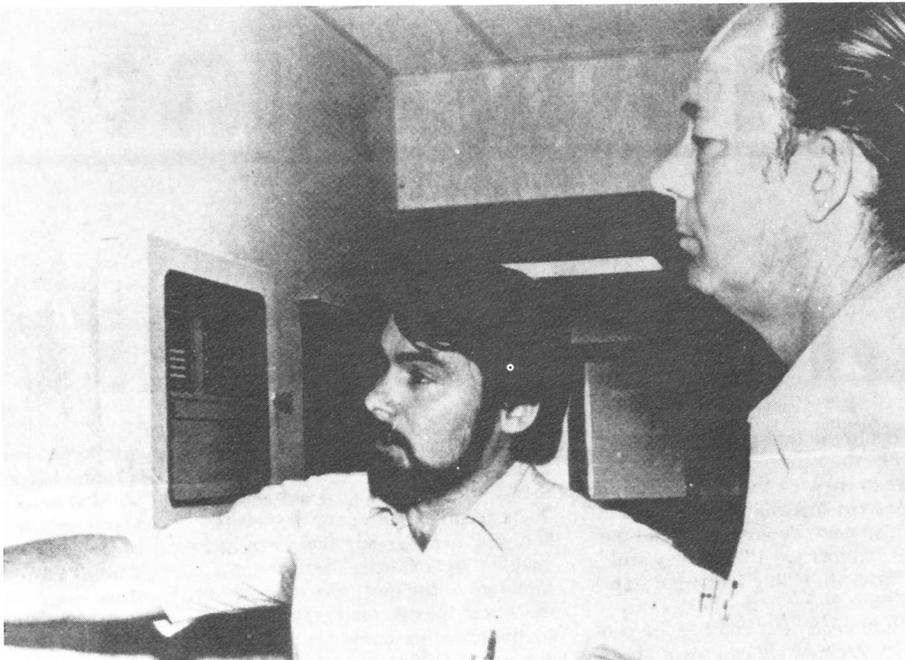


All relays and other equipment are mounted inside the panel so there is just one box to carry.

The cabinet is an ENC-1000-1, the new standard FPU panel with an ENC-1000-101 door. The Panel Unit made the Graphmte display and drilled holes for the equipment. Keith says the unit was relatively inexpensive, especially when compared to the benefits derived. The branches in the Central region will verify that.

If any other branches would like to build this demo unit, just contact Keith. He will provide plans, a bill of material and wiring details. And MTF is sending him a \$50.00 award for his idea.

San Antonio school district welcomes Power/Perfect 5000



Garland Scott (left), BAS engineer for our San Antonio branch, inspected the Power/Perfect 5000 Stand-Alone Energy Management System at the newly constructed Northern Hills Elementary School in San Antonio. With him is the director of plants and maintenance for the North East Independent School District. Northern Hills is the third school in NEISD to operate under a computerized energy management system from Johnson Controls.

The Northern Hills Power/Perfect 5000 is only one of more than a dozen installations. Additional systems are operating in at least five high schools, a hospital, a post office and three commercial facilities.

To help you sell the features of the Power/Perfect 5000, a new four-page Johnson Controls data sheet is now available as Publication 1187. Copies are available from Marketing Communications, Milwaukee, 19-4201.

ALASKA: Where Johnson Controls proves ICE and BAS do mix

Making sure that D-1300 dampers operate when the temperature outside falls to 65 degrees (F) below zero is just one of the problems encountered by the Anchorage branch at the Barrow installation site.

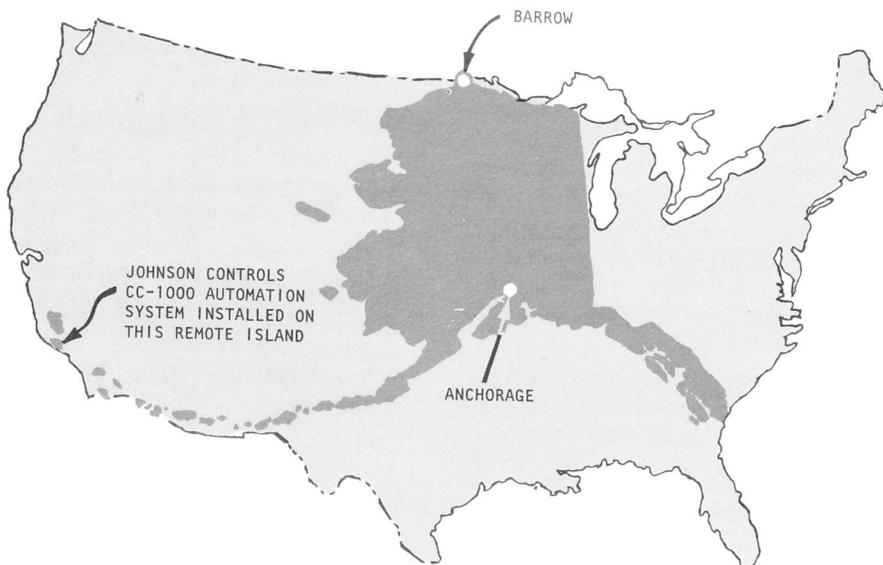
Barrow, Alaska is the northernmost permanent settlement and the largest eskimo village in North America. For 82 days in winter, the sun never rises, and for 82 days in summer the sun never sets. The terrain is flat and is actually a frozen desert. The ground is permanently frozen for thousands of feet below the surface.

Most buildings are built on raised piling foundations (see photo). This is both to keep the permafrost from melting, and to prevent windblown snow from packing under extreme wind conditions.

Winter temperatures can be lower than -50°F with accompanying winds of up to 50 mph. In Barrow, humpback whale is a food staple. Transportation is by four-wheel drive vehicle in summer, snowmobile in winter.

Johnson Controls' Anchorage office has been awarded a contract for almost \$1 million to install a JC/85/40 at the Barrow high school/community center. A true Building Automation System contract, it incorporates temperature controls, IC², security and fire management. The five-building, 100,000 sq. ft. complex will have its own electrical generating facility and will include an olympic sized swimming pool built on above-ground piling foundation.

Terry Terebessy, Anchorage branch manager; Ernie McCallick, Pacific Coast regional installation manager, project engineer, and Gene LaTendresse, project engineer, stood at the main entrance to the Barrow High School and Community Education and Service center. The new Sports Complex is in the background.



Comparison between size of Alaska and lower 48 states.

Battling the elements

Some of the unique "problems" encountered by the Anchorage branch when installing such a system are:

- How to display outside temperatures which go as low as -65°F .
- How to keep D-1300 dampers operable at -65°F .
- How to get more than 60,000 pounds of freight delivered to a location that is not served by highways or

railroads, where below freezing temperatures prevail for eleven months out of twelve.

- How to manage a construction project that is more than three-and-one-half hours away from the branch (by jet).

The Barrow project is the second Johnson Controls BAS system sold on the North Slope. A JC/81 security system guards the power plant at Prudhoe Bay, at the beginning of the Alaskan pipeline.



Product Application

Specialty Lab offers preproduction products

The major purpose of the Specialty Lab which was organized two years ago is to supply limited quantities of products scheduled to become standard but not yet in production. This can give the field advance sales and installation experience before final introduction of the product.

Information about prices, quantities, delivery, warranty and ordering these special products is included in sales memo 338. The products currently available are described on price sheets ATC-0.1 to 0.4.

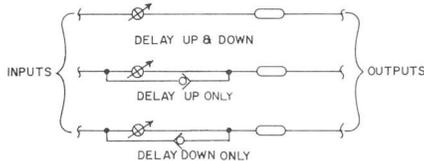
Questions about the program can be directed to Al Anderson, Field Engineering, M-14, phone 274-4812.

Special products currently available from Milwaukee's ATC Engineering Specialty Lab include the following:

- C-2100 Adjustable Set Point Multiplier
- Outdoor Air Override Module (C-7610)
- P-5215 Differential Pressure Transmitter, 0-1", 0-5" w.g.
- T-3102 Heating-Cooling Remote Bulb Energy Manager Thermostat
- T-5002 Direct Acting Transmitter (for use with C-7610)
- T-5220 Remote Bulb Precision Temperature Transmitter

C-2120 to be discontinued

The C-2120 time delay circuit, a special product presently being made up by the ATC Engineering Specialty Lab, will soon be discontinued. It has been determined that the old standard time delay (an adjustable restrictor and a capacity tank) is almost as linear, is less costly, and is more reliable than the C-2120.



To provide a quick increase or decrease in opposition to the time delay, simply pipe a diode in parallel with the restrictor. The direction of the diode determines which direction has the fast response. For further information, con-

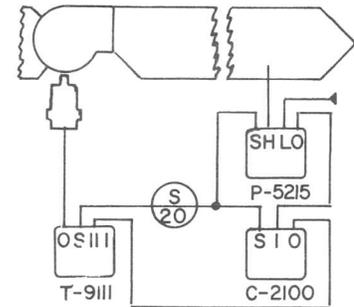
Pressure gage eliminated from A-4210

The refrigerant pressure gage has been eliminated from all models of the A-4210 refrigerated air dryer. The reason for this change is to eliminate possible refrigerant leaks in the gage fitting and the gage extension fitting. A-4210s manufactured after September 1st will not have a refrigerant gage, and the cover will be modified. If refrigerant pressure must be checked, use the gage on a refrigerant charging manifold.

Idea of the month

C-2100 used as low gain controller

The C-2100 ratio circuit, currently available from Milwaukee's ATC Engineering Specialty Lab, is being used by the **Calgary, Alberta** branch as a low gain circuit for input to a T-9111.



C-2100 AS LOW GAIN CIRCUIT

When situations occur when even the low 1:1 gain of the T-9111 is still too high, the C-2100 can be piped between the transmitter and controller. This has eliminated the need for an adjustable restrictor in the output of the controller.

Note: The set point or bias adjustment can be used to "zero" the transmitter.

A \$50.00 "Idea of the Month" award will be sent to **Ben Morgan**, construction superintendent for the Calgary branch, who submitted this idea.

tact Bob Tisdale, Field Engineering, Milwaukee, M-14, phone 274-4808.

Ed. note: The decision to discontinue making the C-2120 was based primarily on feedback from branches which had evaluated preproduction models obtained from the ATC Specialty Lab. A product evaluation form is included with each unit shipped from the lab. We acknowledge that it takes time to fill out the form, but it is this vital feedback that helps provide the branches with a better final product.

V-11 replaces V-24

The V-24 solenoid air valve has been withdrawn from standard equipment and replaced by the V-11 from the Control Products division. *The replacements are identical in all respects except for labeling.*

The change was made to eliminate duplication of literature, stocking locations and inventory. A further benefit resulted in the obsolescence of several CPD versions and upgrading CPD wholesale models to include the same barbed fittings used for V-24s. The mounting bracket supplied is now a multimount version incorporating the V-24 features on the standard CPD bracket.

The cross-reference shown here is a direct one-to-one conversion from SSD models to CPD replacements.

Cross-Reference V-24 to V-11 Conversion

SSD Code No.	Voltage	CPD Product No.
V-24-1	24V 50/60HZ	V11HGA-100
V-24-2	110V/120V 50/60HZ	V11HAA-100
V-24-3	208V 50/60HZ	V11HCA-100
V-24-4	220/240V 50/60HZ	V11HBA-100
V-24-5	277V 50/60HZ	V11HFA-100
V-24-6	440/480V 50/60HZ	V11HDA-100
None	24VDC	V11PNA-100
V-24-1000	Key	V99AA-1

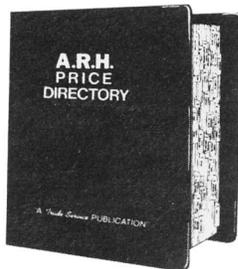
Service Newsletter for customers

A new quarterly newsletter for Johnson Controls service customers is being developed and will be sent to all of our service customers in the US and Canada beginning in November, 1981.

The purpose of the newsletter will be to help keep customers up-to-date on the latest services available from Johnson Controls branches and also to share service experiences that other customers have enjoyed. *Service Dispatcher* will complement our *Trend Log* newsletter that is sent quarterly to customers who have purchased a building automation system from Johnson Controls.

Price reporter helps service departments

Many of our branches currently subscribe to the ARH Price Directory and have found it saves time when estimating unit costs, pricing and processing service orders. It also helps in checking competitive prices.



The ARH Price Directory (Air conditioning, Refrigeration and Heating) comprehensively covers most materials, parts and supplies used in the industry. Offered as a service of Trade Service Publications, Inc., materials are listed in alphabetical sequence and grouped by commodities showing the majority of items of each individual brand listed. Both wholesale trade selling prices and suggested contractor resale prices are listed.

Fully illustrated, the ARH Price Directory is updated each week by regular replacement sheet service via First Class Mail. The book contains more than 2,500 pages.

For branches interested in subscribing, information on ordering this reporting service was sent to each branch manager as a supplement to sales memo 355.

Service Notes

Standard Equipment Update . . . prices for A/S, T, V, Construction and Repair equipment sections have been merged into one ATC price section, 124 pages distributed to the field 8-10-81. The **green (customer) sheets have been discontinued** for this section, since the prices are readily available in the Counterline Catalog price list. Because the **ATC price section now combines the Repair and Standard equipment pricing**, it may be necessary to review the number of copies of these price sheets needed in your office (Distribution 8).

CPM SUPPORT . . . there are 47 publications available covering CPM procedures and equipment. As an additional aid to CPM selling, they can also be obtained as paper-board flip charts. They are listed on Page 16 of Publication 2053, "Sales Promotion Material."

Repair billing . . . **WASHINGTON, DC** has set an **all-time record** for repair billings in a one-month period, \$431,-126 during August. Washington, DC is the **first branch to exceed \$400,000** in repair sales in one month and the third to exceed \$300,000 . . . they beat the previous records set by New York and Baltimore by more than \$100,000. Congratulations, Washington, DC branch.

Don Lane, service sales engineer in the **Washington, DC** branch, would like to thank fellow employees in all the branches (mostly anonymous) who helped in so many ways after the sudden death of his wife, Sally. We extend our sympathies to Don and his family.

PIC points you should know

• **PIC TECHNICAL MANUAL** reissued on August 17 . . . the entire technical manual has been reissued to all sales, service sales and engineering personnel. Be sure to obtain a copy and keep it on file.

• **A NEW SECTION** has been added to the PIC technical manual . . . **SECTION VIII** was included to provide information about special features and applications of PIC.

• **PPCS ESTIMATING** . . . cost data and price data sheets for pneumatic equipment now **INCLUDE PIC ESTIMATING INFORMATION** . . . see BEIMS 42-3.02 and 42-6.02 (August, 1981) sent to managers and/or BEIMS coordinators.

• **TUBING** . . . the PIC system is set up to use 5/32" OD tubing directly . . . for proper usage techniques, see the "Engineering Data Book" Section A, Pages A:21 and A:22.

The **mileage charge rate** to contracts and **repair accounts** for the use of company vehicles has been revised. Branches should begin using this rate for estimating immediately. Rates for contracts extending through 1985 have also been established. Refer to sales memo 42 dated 9/4/81.

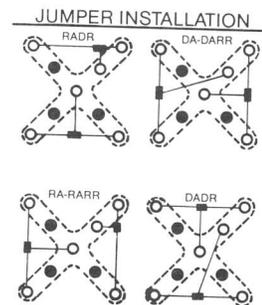
High priority **on-call service** for 990/10 computers and CDC discs will be provided by Texas Instruments (for a fee) . . . it should be used only when expedited service within four to eight hours is required of TI to provide an operational system for our customers. Details are included in a June 11, 1981 memo filed with SPI 41-93.

JC/80 and JC/85 **EMERGENCY WEEK-END REPAIR PART SERVICE** . . . the **telephone number** for this service has been changed to (414) 276-6553 . . . this is the phone in the TABS central operation in Milwaukee. When you call you will be informed whether or not the part is available . . . see standardization notice 81-9-9 for details.

T-9000 program module replaced

To improve overall performance, the program module on T-9000 series instruments, used to select the proper action and/or readjustment of the controller, has been replaced by tubing jumpers.

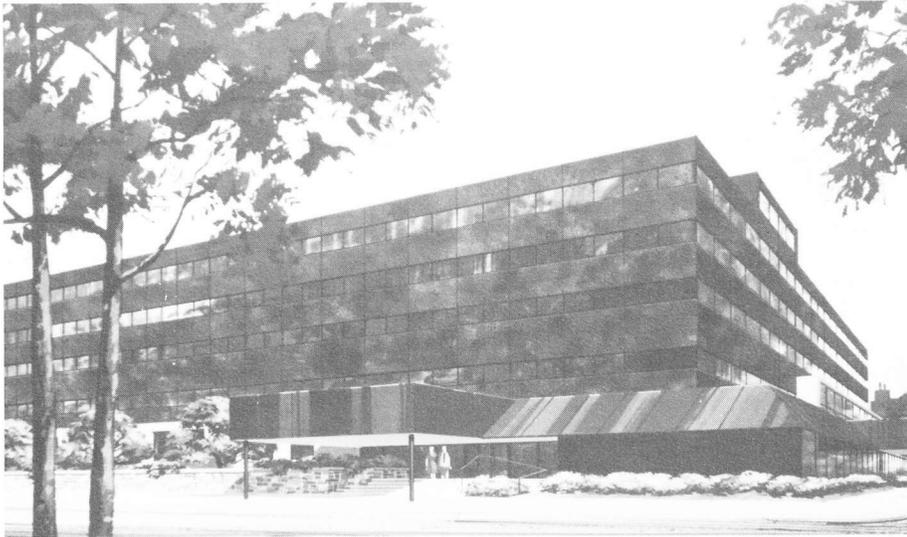
Several branches received these T-9000s with no explanation of the tubing connections required for a given action/readjustment. The label, which is reproduced below, will allow you to check or program these T-9000s. The label is now being affixed to all T-9000 covers, including those on PIC.



If necessary, the T-9000 can be reprogrammed by slipping the tubing off and attaching it in the new configuration.

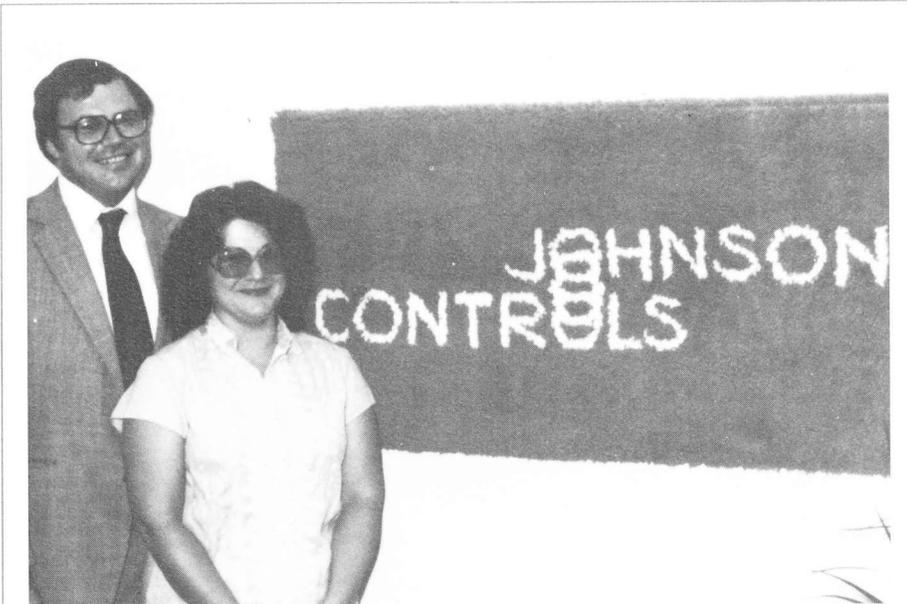
Around Johnson

East is in, Inn is out



The Park East Hotel (formerly Milwaukee Inn), home away from home for many of our past attendees at Milwaukee training schools, has been completely remodeled and is now one of the most modern and prestigious hotel/convention centers in downtown Milwaukee. Beginning May 1st, Johnson Controls branch employees attending training classes in Milwaukee began staying at the Park East

Hotel, 916 East State Street. For a year-and-a-half before that, our employees were housed at the West Allis Inn, seven miles from downtown Milwaukee and SSD headquarters. This necessitated a scheduled half-hour bus ride each way and was found to be not conducive to work in training labs, etc. According to those who have already stayed at the Park East, "the rooms are great."



SHARON LYLES MADE THIS LATCH-HOOK WALL HANGING FOR HER HUSBAND, ALAN. After two months of latch-hooking and thousands of pieces of yarn, Sharon Lyles presented her husband, Alan, with a Johnson Controls latch-hook wall hanging for his office. Alan Lyles is the service sales manager for the Southwest region, Dallas. The impressive wall hanging of the Johnson Controls logo is four feet wide and two feet high, and of course it's blue and white. (If other branches are interested in making a similar wall hanging, contact the MTF editor, Milwaukee M-46, phone 4327.)

SSD PEOPLE

*A Monitoring The Field
Special Issue to be
Published in December*

MTF will again dedicate the holiday issue to the PEOPLE of our division.

News will cover a wide variety of activities, including branch business news, branch open houses, picnics, sports teams, loyalty award presentations, and personal endeavors such as club officer-ships, coaching or volunteerism.

All branches are invited to participate in this special issue. Send your photos, along with written details, to the MTF editor, Milwaukee M-46.

The deadline for submitting information is October 30th.

Construction begins at Reynosa

Construction of the new SSD electronics manufacturing facility began at Reynosa, Mexico during August. The 65,000 square foot plant on 11 acres is scheduled to be completed in the spring of 1982. An associated staging and warehouse facility of about 10,000 square feet will be leased in nearby McAllen, Texas.

Letter to the editor

"I would like to express my appreciation for expediting some Lomagna valves required for a 40-story high-rise building here in Boston. Credit should go to **Don Kujawski** in Milwaukee's purchasing department and **Jim Hoogenboom** in Georgetown's traffic department. The truck driver, **Harold Fisel** (who has since retired) also deserves credit for helping move the shipment quickly. It seems as though good work sometimes doesn't get recognized and rewarded until problems arise. Thanks again for putting this one to rest."

**Herbert Berg, project engineer
Boston branch**