

Systems & Services Division
Johnson Controls, Inc.

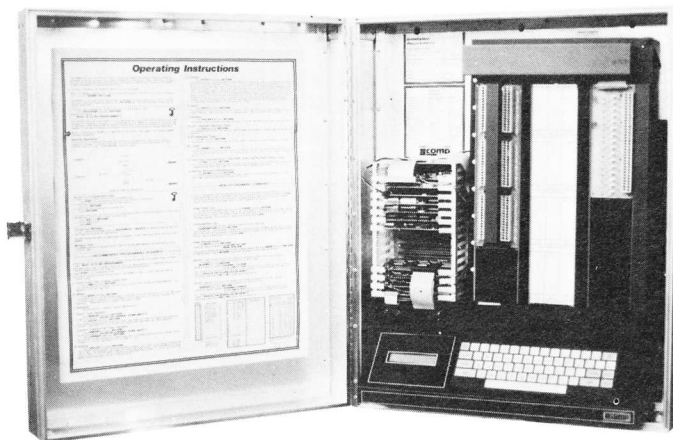
Monitoring The Field

June, 1981
Vol. 25, No. 6

New system complements BAS spectrum

For some time, branch offices have been asking for a product to fill the gap in our spectrum between the Power Perfect 1000-8 and the JC/85/10. Our sources indicated a need to fill this gap in our product offerings and take advantage of a larger segment of the energy management systems market.

The **Single Building Energy Management System (SBEMS)** is a small, stand-alone system that provides a cost-effective solution for buildings that are not large enough for another type of Johnson BAS installation. The **energy management programs** resident in the **SBEMS-B** microcomputer are contained in erasable programmable read-only



memory. The programs include timed events, duty cycling, demand limiting and optimal start. Timed event programming has four start-stop pairs available per load per day type.

Four separate day types are available to allow different schedules for weekdays, Saturday, Sunday and holidays. The holiday function allows up to 28 holidays to be scheduled each year. A separate pair of entries will also program the SBEMS to change from standard to daylight savings time and back on the programmed dates.

The **duty cycling program** associates a duty cycle interval and off time with each start-stop program interval. This allows the duty cycle pattern to shift four times per day type per load. If analog is ordered in the SBEMS, temperature override of duty cycling is also possible.

(continued on Page 2)

Fire hits Harrisburg branch

A four-alarm fire at 1:45 a.m. on May 6th totally destroyed more than 25% of the building where our Harrisburg branch is located. The cause of the early morning fire was still under investigation at the time of this writing, but it was thought to be electrical in origin.

Harrisburg "All Fired Up;" Page 2

Two firemen were injured while fighting the blaze. The fire took three hours to bring under control, and caused extensive fire and smoke

damage to the first floor offices, and smoke and water damage to the basement and shop.

The Harrisburg branch had just signed a lease for an additional 1800 sq. ft. in the building, and that was the area that was completely destroyed. "The only reason we weren't totally destroyed was because we were waiting for a leaky roof to be repaired before moving in to our expanded area," said branch manager Neal McGee.

Harrisburg's engineering department, located in the basement, suffered the most extensive water damage, and the entire branch had severe smoke damage.



The charred entrance to the Harrisburg branch after a fire on May 6th.

Inside this issue

Branch PIC Report, **p. 3**
Canada Connection, **p. 4**
Mechanics' Training, **p. 6**

Harrisburg office is "fired up"

Wednesday morning, May 6th, began as usual when my alarm radio went on at 6 a.m. I arose and shaved and showered while listening to the music and weather. Then came the news. The headline for the morning news was "four alarm blaze strikes offices of Johnson Controls, Inc."

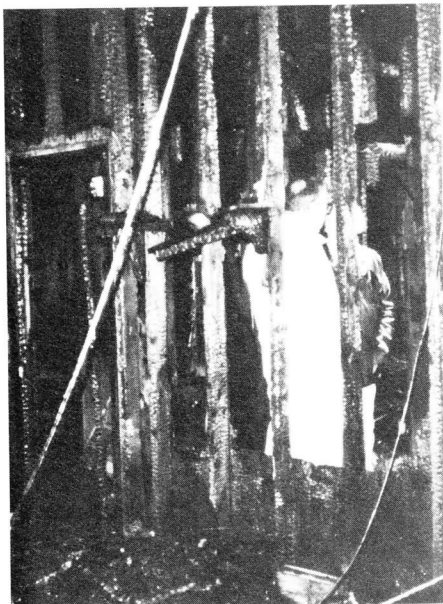
I stood there in a daze, trying to decide whether to believe what I had just heard.

I returned to the bedroom and asked my wife if she had heard the news. She said "no," and as I repeated it to her, the phone rang. It was Mr. McGee, our manager, calling to tell me about the fire and ask me to call the rest of the office force and warn them to come to work dressed for cleaning up the debris. Most of my co-workers had not heard the news and were soon in a daze like I found myself still in.

I don't remember eating breakfast, but I'm sure I did.

When I arrived at the office I found the expected array of standby fire trucks, police, sightseers and dazed co-workers with that "where do we begin" expression on their faces.

The first thing I saw when I entered the office was sales engineer Walter Gingrich, seated at one of the two phones still working, bidding a job. In spite of soot covering everything, and the sickening odor, work must go on!



"IT LOOKS LIKE IT WILL BE A WHILE BEFORE WE MOVE IN." Neal McGee (left) and the building owner survey fire damage in what was to be the expanded Harrisburg branch.

This account of what it's like to hear on the radio that your place of employment has been hit by fire, and then trying to work in the aftermath, was reported by Larry Fisher. Larry is administrative assistant in the Harrisburg branch.

In no time at all, everyone pitched in and began to move out, clean up, dry out, throw out and relocate until everyone had a place to work. The engineering department relocated to the vacated oral surgeon's office at the opposite end of our building.

In the weeks that have passed since the fire, we have worked without phones, relocated each other several times to



BUSINESS MUST GO ON: Walter Gingrich bids a job before joining cleanup crew.

SBEMS *(continued)*

The **demand limiting program** is a sliding window type compatible with most power company billing structures. It will accept either power company pulses representing Kwh or current transformers where pulse inputs are not available.

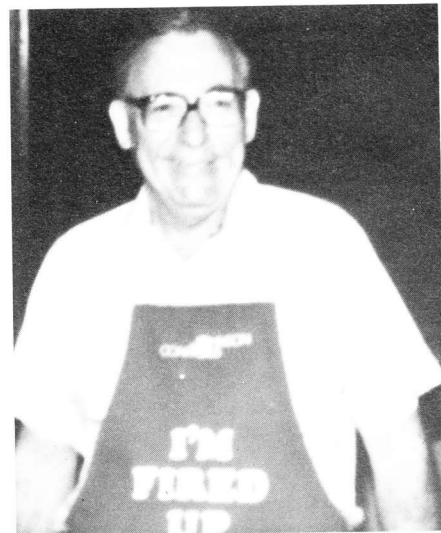
Optimal start programming requires analog capability to be ordered on the SBEMS. Mass temperature is measured to advance the first programmed start time and precondition the building. An early stop time is also possible with the SBEMS program.

Rounding out the list of programs in the SBEMS are programs for **energy consumption records, demand peak memory, limited interlocking and trend logging of analogs.**

The SBEMS-B is housed in an M-8100 enclosure to serve as a wall-mounted system. It features ease of installation, high reliability, and modular expansion capability. The resident software package employs interactive, English language prompting to speed programming via an ASCII keyboard and 40-character alphanumeric display. Full access to the program

allow cleaners and contractors to do their jobs, and made countless trips back and forth from one end of the building to the other.

Through it all, the office has remained open and operating. In spite of the mess, discouragement and haste, overall office morale has remained high. This is due to the cooperation of the entire staff, the cool-headed, accommodating leadership of our manager, Mr. McGee, and everyone's sense of humor.



CLEANING UP IN STYLE: Harrisburg manager Neal McGee found another use for the apron he received at the regional EBM meeting.

data base is also available from the interface port (RS-232C) which is capable of matching most printers and CRT's.

An analog input card and program allow the use of standard Johnson Controls TE-1000 sensors, GQ-4000 bridges or 4-20 MA transmitters as inputs.

Second model available

A second version, SBEMS-A, retains all the functions of the SBEMS-B, but utilizes a four-digit display, a 17-point keypad and a coded series of prompting messages for programming data. Its lower cost and smaller capacity may be attractive enough for a building owner to sacrifice the keyboard, large display and English program prompts used in the SBEMS-B.

How to order

The SBEMS will be listed on Page E-14 in the Branch Purchasing Directory. Detailed information and manuals will be sent to each U.S. and Canada branch (manager) and the regional offices before July 1st. Questions about the SBEMS should be directed to Mike Bonfiglio, Field Engineer, Milwaukee, phone 4792.

PIC means progress

Branches comment on new system

In January we introduced our employees to the new pneumatic integrated control (PIC) system (MTF, January, 1981). PIC also made its industry debut at the international ASHRAE Show held in Chicago during January.

Since then, the four week-long training sessions have been completed, attended by one person from each branch. Technical and promotional literature has been distributed. Most branches have computer terminals and phone couplers for ordering PIC systems.

Most branches are very enthusiastic about PIC. They have discovered what it can do for them, and they are ordering more systems.

DALLAS: David Lippe, HVAC supervisor, reports that they are very satisfied with time savings, especially in preparation of submittals. What used to take weeks will now only take a day or two. One customer with a critical need purchased a duplicate PIC unit as backup. That's modular!

SAGINAW (branch with most PIC orders to date): Tim Paeth, application engineer says that after the initial learning curve, PIC saves 50% on overall preparation time of drawings.

PHILADELPHIA (biggest order for a single job to date, 10 PIC systems on one job): Jeff Pearson, engineering

manager, likes the use of master drawings. Response to PIC from consultants has been good. He may try submitting a completed predesign worksheet in the future, instead of a complete drawing.

SAN ANTONIO: Gary Knutson, engineering manager, ordered a PIC unit as a "demonstrator" for a consulting engineer. He says it looks like an order for 18 units is just around the corner.

If your branch has not yet discovered PIC, take a closer look. Others are already saving time and money with this system. If you would like to share your good news about PIC, send us your success stories.

PIC points you should know

- **PIC pre-design worksheets** are now available in pads of 25. Order from the Milwaukee Stationery Department. Ask for Form 6597.

- **Commissioning requirements** . . . consider the cost savings if we convince the engineer that the PIC system troubleshooting and adjustment procedure furnished with each unit meets commissioning requirements. Remember, the PIC system is under warranty as long as no adjustments are made or seals broken.

SSD wins Marketing award

The Systems and Services Division of Johnson Controls, Inc. has been selected as Wisconsin Marketer of the Year for 1981 by the Milwaukee Chapter of the American Marketing Association. The winning presentation was based on development of marketing strategies for and introduction of the JC/85 building automation system. The award is regarded in the business community as a compliment to our business skills.



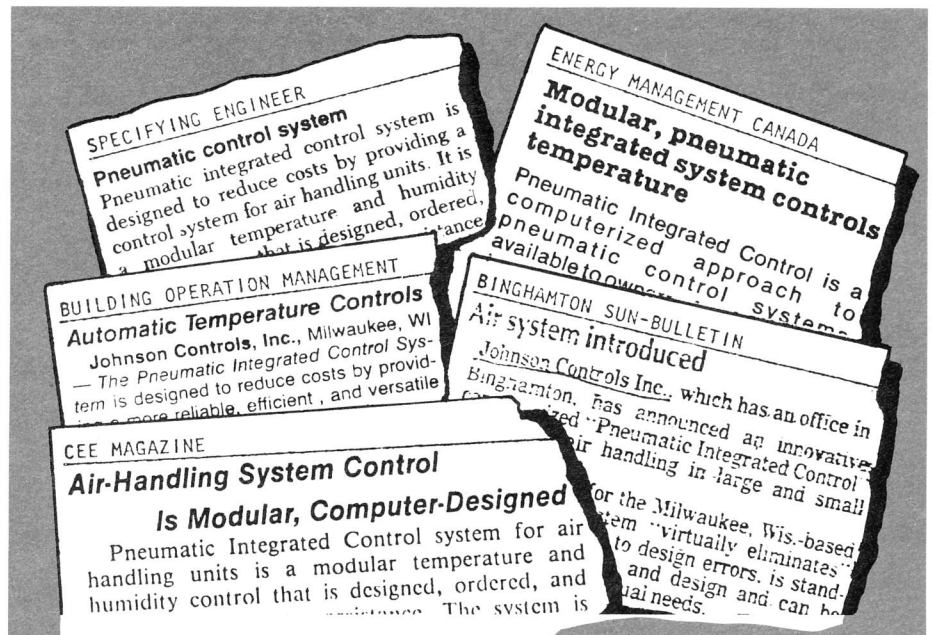
George Huhnke, manager of Marketing Communications, and Ron Caffrey, vice president of Marketing, accepted the Marketer of the Year award.

Monitoring The Field

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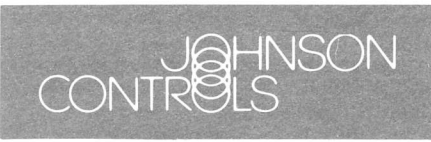
Letters may be addressed to the Managing Editor, *Monitoring The Field*, Johnson Controls, P.O. Box 423, Milwaukee, WI 53201.



PIC Publicity

Johnson Controls' PIC system was introduced industrywide via articles appearing in technical/trade publications. Our press releases announcing the new system were

sent to more than 150 such publications. In addition, our press release and photos were sent to each branch manager, who was in turn requested to submit it to the local press.





A new Johnson branch even the contractor loved



The contractor who built our new branch facility in Baton Rouge was so impressed with some of the design details that he plans to incorporate many of them in his own soon-to-be-built headquarters building.

Canadian Connection

Dave Bigler, Canadian vice president and general manager, is shown here during one of his many repatriations to SSD headquarters in Milwaukee. Since Dave is a U.S. citizen, there was some concern that he might realize he had escaped "Trudeaumania" and never return. To counter such a threat, a duplicate Canadian headquarters has been set aside for him in Milwaukee, complete with Canadian flags and maps.



Hilda Pielmeier, who makes all schedule arrangements for Dave in Milwaukee, announces his presence to Milwaukee personnel by displaying two small Canadian flags at his office entrance. A much larger Canadian flag stands inside the office, and another was flown at our corporate headquarters facility while he conducted his business there.

Canadians can now breathe easier, confident in the knowledge that their beloved Dave simply views the U.S. as Canada's 11th province.

When employees of the Baton Rouge branch moved to their newly built facility, they had only good things to say about it. Comments included opinions such as "a beautiful facility in a good area of the city. The colors are neutral and pleasing, traffic pattern is good, lighting good, and overall appearance excellent."

Perhaps the ultimate compliment came from the general contractor who built our facility and was in the process of designing a new headquarters building for his own firm. He incorporated many

of our ideas into his design, and was especially interested in the furniture, color scheme, carpeting and wall covering. "They are even using our idea of fencing in an area for inventory and tool control, and they also plan to use the open area concept for estimating," said George Reed, Baton Rouge branch manager.

Interior design details for the new Baton Rouge branch were handled by Ann Stark of the facilities planning department in Milwaukee.



Some of the Baton Rouge employees are shown at the open house and dedication for their new branch facility. From left are, Don Savoie; David Burleigh; Tom Martin; Mike Cotten; Nancy Overby; Mike Hargrove; Gary Sanderlin; John Stockwell; George Reed (branch manager); John Hodgeson; Glen Stevens; John Rodwig, and Janis Taylor.

Million Dollar Club Total Sales Volume Awards 1980

The following US and Canada branch offices have been awarded certificates of achievement for officially reaching a **NEW** million dollar plateau for total sales during 1980. Congratulations to Canada and the Northeast and Southeast regions for having the most branches within their regions attaining a new million dollar plateau during 1980.

\$14 Million Boston New York	\$10 Million Indianapolis	\$8 Million Houston	\$5 Million Norfolk Seattle Union Vancouver	\$4 Million Calgary Cincinnati Phoenix Portland, OR Richmond	\$3 Million Buffalo Chicago South Columbia Halifax Louisville Oklahoma City Omaha	\$2 Million Albany, NY Albuquerque Casper, WY Duluth Jacksonville Little Rock Memphis New Haven Wilmington
\$13 Million Toronto	\$9 Million Atlanta Dallas/Ft. Worth Milwaukee Philadelphia	\$7 Million Baltimore Edmonton Montreal Tampa				
\$11 Million Chicago Los Angeles						

Award Presentations Canada

These photos show the Canada recipients of sales goals achievement awards presented during the Canada and Midwest regional EBM meeting at the Abbey Resort in Lake Geneva, Wisconsin. The four regional EBM meetings have been completed, and portions of the seminars were videotaped so they can be used to train future sales managers.



The **TORONTO BRANCH** was honored for outstanding achievement of six sales goals: ATC, BAS, APS, Service, TABS and total volume. From left are, George Doig, vice president, Johnson Controls, Ltd., and Toronto branch manager; Dave Bigler, vice president and general manager, Johnson Controls, Ltd.; Bill Braak, vice president and SSD sales manager; Ron Caffrey, vice president of Marketing, and Jim MacLean, vice president and sales manager for Canada.



MILLION DOLLAR SMILES: Ron McMaster, Vancouver branch manager, Brian Sheridan, Montreal branch manager, and Ron Buffel, Edmonton branch manager. All three branches reached new million dollar sales plateaus during 1980.



Marv Hounjet,
Regina branch manager
"Too hot to handle."



Cliff Morrison
London branch manager
"Is this all there is?"



Jim MacLean
"Nothing for me?"



SANDRA BAINBRIDGE was the surprised recipient of one dozen red roses presented by the Canada and Midwest contingent following her day-long presentation on sales skills and social styles. Sandra is supervisor of management development and sales training. She coordinated the four sales/management sessions and eight sales skills sessions for the four two-week EBM meetings.

Service Notes

Anderson-Snow Corp. is the new **supplier of replacement coils** (steam, hot water, chilled water, DX, special). Their address is 9225 Ivanhoe St., Schiller Park, IL 60176. Complete details are outlined in TNT letter #17 and the A-S catalog recently sent to all service sales managers.

* * *

Smartstat programmable thermostats . . . almost 5000 have been purchased by our branch offices.

* * *

A **source for refrigerants** for use with refrigeration compressors has been added to the Branch Purchasing Directory. Purchase locations nearest each branch are listed. Refer to BPD Page R-4, distributed April 15th.

* * *

Mechanical Specialties, Inc. (MSI) is an independent wholesaler of compressors and parts for HVAC equipment. **They specialize in Nesbitt replacement parts.** For purchasing information, refer to TNT letter #18.

* * *

Many energy consultants recommend that building owners do not try to cut costs by having in-house personnel do retrofit work — a decision that may prolong the construction period and end up costing the owner more money. In many cases, the building staff can barely keep up with routine maintenance work. The consultants recommend that it is definitely better to hire an outside firm to do retrofit work.

* * *

Approximatley one-third of our in-house **PIC ORDERS** are for **SERVICE WORK** . . . 5000 series jobs . . . service is a big market for PIC, keep it in mind.

* * *

Johnson Controls has signed a **national account agreement with Urban Engineering of Chicago**, one of the largest diversified developers in the U.S. They are currently responsible for 28 million sq. ft. of shopping centers, office buildings, etc., and have approximately one billion dollars of construction under development or planned before 1985. Details of our agreement are covered in sales memo 350.

* * *

Kris Roos, service coordinator in **Tampa**, was scheduled for a short stay in the hospital . . . after minor surgery she set up shop and processed work orders from her hospital room . . . now that's dedication!

* * *

Anyone who travels on company business should read the updated **TRAVEL and ENTERTAINMENT POLICY** guidelines contained in SPI 41-213 (one copy to each branch, dated 4-15-81). The policy is intended to clarify company travel policies and establish new requirements for previously uncontrolled areas.

Training expanded to include HVAC service mechanics

For many years, most of the branch offices have conducted mechanics' training in one form or another. It ranged from on-the-job training, to holding formal classroom training sessions in the evenings or on weekends every month. The participation and results of this training varied greatly from branch to branch. In addition, the work involved in putting together the monthly meetings was found to be time consuming and detracted from normal day-to-day work activities.

As a result, a commitment has been made to develop a standard training program for our field personnel in the U.S. and Canada.

Oakleaf named supervisor

Ken Oakleaf has been appointed to the new position of training supervisor for HVAC service. In his new position, Ken will report to Dave Podeszwa, SSD manager of training and education. Ken will be responsible for developing, implementing and evaluating a training program primarily focused for service mechanics.



For the past five years, Ken has served as a service mechanic, lead refrigeration mechanic and service salesman for the Madison branch office. Prior to joining Johnson Controls, he worked for a servicing contractor as a service mechanic and service manager. He has also held the position of chief training instructor for Bell and Gossett's air

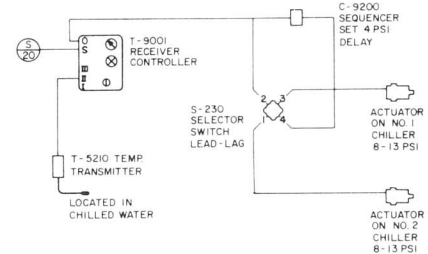
conditioning equipment, and was an HVAC training instructor in the military service.

Ken will identify field service training needs and develop programs, plans and strategies to satisfy those needs. Some of those needs include ATC (both pneumatic and electronic), mechanical equipment, air conditioning equipment, boilers and burners, refrigeration equipment and HVAC systems training.

Ideas of the month

S-230 and C-9200 used in lead-lag application

Calvin York, service department foreman for our **Baltimore** branch, will receive a \$50.00 award for submitting this idea to use the S-230 and C-9200 in a lead-lag application.



With the S-230 selector switch in the "left" position, chiller #1 will operate first and chiller #2 will lag behind. In the "right" position, chiller #2 will operate first and chiller #1 will lag behind. The C-9200 will sequence the lag chiller in either position.

Thermostat calibration, service contracts

Bob Blakeney, pneumatic application specialist in the **Halifax** office, submitted the following idea for which he will receive our \$50.00 "Idea of the Month" award.

Bob thinks that the T-4000-615 plug-in test point fitting used in the T-4000 series thermostat would definitely be a time-saver on service contracts that are renewable each year.

By replacing the old test cap plug with the T-4000-615 during calibration of room thermostats in a building, the service mechanic would only need a hypodermic needle for calibration instead of removing the test cap plug and inserting a 0 - 30# air gage each time.

T-6000 repair part agreement

Johnson Controls and Amtronix Industries Ltd. have reached an agreement for the continued manufacture of T-6000 repair boards. The arrangements were made to provide faster response times when you need T-6000 boards.

A price list of "standard" parts to be manufactured by Amtronix will be published in a repair parts bulletin. Procedures to be followed have been issued in sales memo 351 (5-14-81). If you have immediate need for a T-6000 repair part, call Katie Wheeler at Amtronix, phone (414) 255-2620. She will instruct you on the particulars for any repair part you may need. Amtronix will also quote and build any non-standard board that is not listed.

EBM

Tip of the Month

Softening Rental Market

The current building boom may lead to a glut in office space that will force owners and managers to make their buildings more energy-efficient if they want to be competitive in a soft market, according to a survey of energy consultants and building owners and managers.

Energy management will be a particularly important consideration in major cities in Middle Atlantic, North Central and Western states, where building construction is increasing at a faster pace than occupancy levels, according to statistics compiled by the Building Owners and Managers Association (BOMA) and real estate firms.

Because new office buildings are being designed with a greater attention to energy-efficiency, *many owners and managers of existing buildings are funding energy conservation measures to remain competitive in the softening building market.*

Tip: Although office space is still at a premium in many cities, who knows what the rental market will be five years from now. In today's market, some owners feel they don't have to have an energy-efficient building to attract tenants. Urge your potential customers to consider the long-range picture when evaluating energy conservation investments.

Idea of the month

Grease fittings eliminate chiller hangups

Bob Wilson, service mechanic for the **Birmingham** branch, greased his way to a \$50.00 award by submitting the following idea.

Occasionally, centrifugal water chillers bind within the linkage bearings. The pneumatic actuator may be adequate under normal conditions, but due to rusted shafts, etc., overloaded conditions may occur. In order to remedy this, Bob suggests the following.

Drill and tap for a grease fitting and then fill hole with grease. This lubricates the bushings as well as prevents continued condensation of moisture in the cavity. Rusting of steel shafts may occur during construction periods when chillers are outside or in unheated areas.

The Trane chiller shown in the photo at the right had a Powers actuator before modification and a Robertshaw recorder still controls.

Thermostat guards for service sales

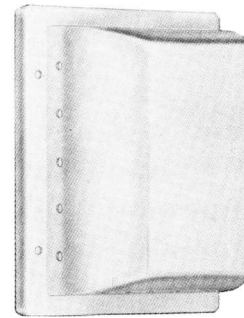
If the CPD (Penn) thermostat guards don't fit the bill, what else can you use?

Many of you have asked this question. Often the answer turns out to be a local representative selling a "universal" guard for an unbelievably high price.

We are trying to come up with one or two guards that would be available at a reduced cost to Johnson Controls. We would then publish this information in the Branch Purchasing Directory. What are your suggestions? (Send yours to Dale Hawley in Milwaukee, M-8).

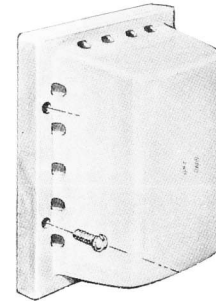
Mark Abate and **Tim Lyons**, service sales engineers in the **Rockford** branch, use the *Thermo-Gard* cover made by Mason Manufacturing in Chicago. It is available in clear or frosted white plastic, has a metal mounting ring, rounded corners and tamper-proof screws. Mark says "it is ideal for school districts — even a sledge hammer won't crack it." The **Chicago South** branch also uses this guard.

Ed Bullock, service coordinator in our **Detroit** branch suggested a guard made by *Uni-Gard* of Birmingham, Michigan. It comes in white polypropylene or smoked-clear Lexan, has a plastic mounting ring, rounded corners, and also has tamper-proof screws. Ed says it is especially useful to fit over thermostat conversions (except the T-4000-605 and -612 kits).



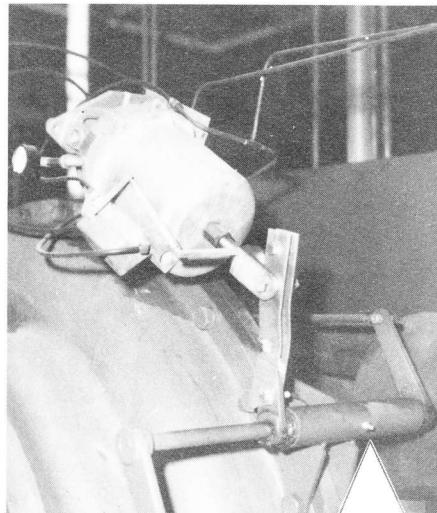
THERMO-GARD

Opening: 6-1/2" (H)x4-1/8" (W)x4" (D)
Mason Manufacturing Co.
4140 West Victoria Street
Chicago, IL 60646
Phone: (312) 463-8500
Ask for: Diana Gorden



UNI-GARD

Opening: 7" (H)x3-7/8" (W)x3-1/4" (D)
Uni-Gard, Inc.
22680 N. Nottingham
Birmingham, MI 48010
Phone: (313) 647-4848
Ask for: Mary McDonald, Sales Mgr.



GREASE FITTING



*There was a large pair from JC
Who tried to make mincemeat of me.
I protected the stat
From the ax and the bat
And each blow felt just like a flea.*

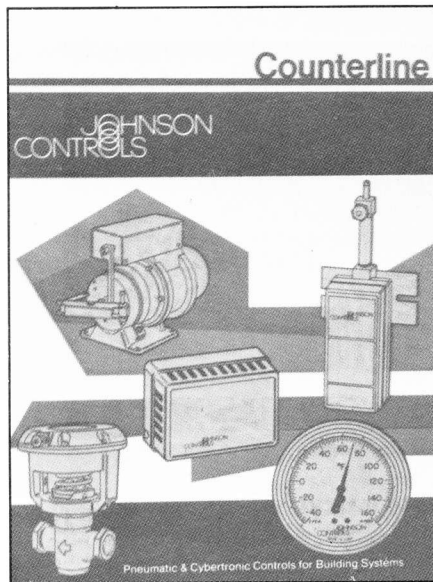
Proving a point about the strength of the thermostat guards are national service sales manager Tom Zukowski (the thinner one on the left) and market research manager Evan "highpockets" MacLeod.

Counterline Catalog revised, expanded

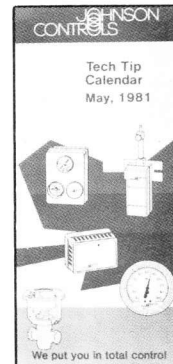
The Counterline Catalog has been revised and mailed to approximately 10,000 registered catalog holders. The catalog now includes our entire Cybertronic product line and is more than 200 pages long. New pneumatic products have also been added.

A new section provides damper application hints and instructions for sizing damper actuators and valves. The catalog offers customers several extra services available from Johnson branches, such as:

- the new drafting template is available to simplify drawing Johnson instruments and systems when contractors prepare control drawings.
- the Cybertronic Applications and Systems Manual is available through the Counterline Catalog.
- the catalog outlines a new "stocking program" where the Johnson branch will set up and maintain a parts and repair parts inventory program for a customer.



A DA-3200 actuator, symbolic of the Cybertronic product line, is shown on the cover of the revised Counterline Catalog.



Tech Tips consolidated

The response from customers and Johnson Controls employees to our monthly service Tech Tip Calendars has been gratifying. As an additional service, some of the more important tech tips from the past year's calendars have been consolidated and published in booklet form. The pocket-sized booklet is the same size as the calendar. The first edition includes calibration instructions.

The booklets will be mailed to approximately 10,000 registered Counterline catalog holders and other customers as requested by the branches. Each branch will also receive a quantity of booklets, and extra copies are available from Catalog Service in Milwaukee, 19-4201.

Our readers write . . . about Counterline

Mike Beal, application engineer in the Chicago South branch was one of several branch people who wrote to ask a similar question:

"We would like to see the Counterline Catalog distributed with punched holes for a 3-ring binder. We recently needed to include the catalogs as a parts list for a submittal and had to drill the holes in them so they could be placed in a 3-ring binder. Wouldn't this also allow any customer to place the catalog in his own binder, along with other Johnson data he may have?"

The idea of drilling three holes in the catalog was thoroughly studied when the first edition was issued. It was determined through surveys that when a catalog is drilled with holes for filing, that's just what happens to it — it is filed away and not used.

When a catalog is not drilled with holes, it tends to be left on a desk, drafting board, etc., and is used much more often.

During informal observations in customers' offices we found that customers take the Honeywell catalog

(which is drilled with three holes) and file it away in a binder. But our catalog can be seen on desks, ready for use. Our catalog can be placed on a shelf with other catalogs, easily visible and ready for use.

When parts lists are required for submittal, it would be better to use individual repair parts sheets, or, for product submittals, use our Product Directories. These sheets are far less expensive than one Counterline Catalog.

What is Counterline? New manual provides answers

One copy of the new "Counterline Manual" will be sent to the service sales manager in each branch by mid-July.

The manual, in a blue Johnson binder, attempts to answer all questions pertaining to branch office operation of the Counterline area. It includes sections on customer training, job descriptions, office signs, advertising,



CPD features Cybertronic controls

The monthly tech tip calendars issued by the Control Products Division (Penn) are currently featuring our Cybertronic controls product line. CPD tech tip calendars are used as sales tools by wholesalers and distributors.

inventory, form letters, and handling cash. The format is arranged so that future additions or changes can be easily accommodated.

"The manual is intended as a reference, not necessarily something that must be read from cover to cover," said John Levenhagen, administrator of the Counterline program.