

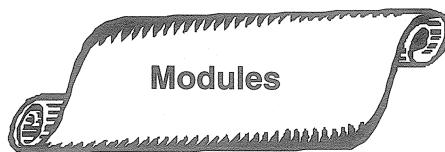
CROWN CRITER

Since 1971

Crown International, Inc. Employee Newsletter

Oct.-Dec. 1996

A Banner Year - 1996



Nearly 100 employees and three supervisors, Beryl Loomis, Bob Caprarotta and Kim Clingenpeel, made Modules the largest production team in 1996. They increased the number of modules (printed and stuffed circuit boards) produced from an average of 4,500 boards per week in December of 1995, to a peak of 9,201 boards produced the week ending August 9th.

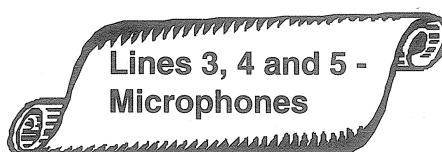
Production of the new D-350 amplifier module required:

- new space in Plant 2B
- new slide line
- new wave solder machine
- new automatic insertion equipment
- new stockroom in the department
- functional testing on the line

New processes cut lead times and eliminated steps. For example, bagging and unbudging of part kits for each module and part counting by the corporate Stockroom was stopped.

Tracking quality problems, which produced about three defects per 100 modules in April, has reduced defects to one- and-a-half per 100 modules. Opportunities for Improvement (OFIs), a system adapted from Amcron, are regularly submitted by employees and tracked through implementation or investigation.

In the future, supervisors hope to be more timely in investigating OFIs and eliminating those hard-to-find defects. Also in the future is demand flow technology which is just getting started with some kanban supplying of parts.



Home of the famous "D-75 girls" who have worked side-by-side for more than 20 years, Helen Cosby's people consistently hustle to produce products for the ever-increasing demand for shipments. Currently they assemble the D-75, DCA, D150 and ComTech amps, microphones and accessories.

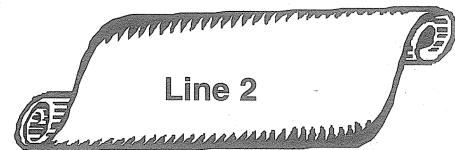


*On Audio Order Entry
Manager Deb Frantom's
desk, Santa held a candle
to the goal:
\$100,000,000 FY96!*

When Helen gets a call from Master Scheduler Bev Laws which starts out, "How do you feel about doing this?" they know they will be adding mics to the shipments.

Helen says, "Give them the work and the challenge and, unless there is a part that cannot be found, they always make shipments!"

The microphone assembly will soon be moved into the former Plant 2A lunchroom area where they will have the rare treat of having windows. Rearrangement of the lines will offer some new challenges in '97, but added space will help them to work more efficiently.



Supervisor Brenda Mortimer said they have met and conquered the challenges of the move to Plant 2B. They have new workbenches, procedures and build different products than they built before. No longer do they stack inventory and units in a staging area. "It's neat to start an amp in the morning and see it packed in the afternoon," she said.

With all assemblers cross-trained for various stations and products (MTs, PTs and CSLs), the line is more flexible and actually down to 16 employees from 22 earlier in the year. They built a high of 62 units in a day recently without full staff.

Injury rates and pain have dropped with the new stand-up line and higher benches. Most employees like the new set-up, although some elected to continue to work in a sit-down situation and moved to Line 4. Line 4 will move to 2B in '97.

Line 9

The original demand flow line has experienced "quick change" in '96 according to Supervisor Paula McBrier. They moved from their first location in Plant 2 into the new Plant 2B. The move is still not complete. They are sharing a prep-pack area with Line 3, and they lost two workbenches.

New faces and new products have challenged the team to help each other and other lines, as they become more and more versatile. It takes at least three months for an assembler to get up to speed in four major areas:

- mechanical
- soldering
- tie wrapping (wire arrangement)
- knowledge of 20 different pre- assemblies.

Line 9 has added another version of the PowerBase amps, the 460, and MicroTechs to their production.

Fab

Bud Robbins hit the Fab floor running when he began in November of '95. He says "exciting" and "record-breaking" are the norm as far as he has seen. But Fab is changed and more efficient due to:

- new (2nd) brake press
- new (2nd) heat sink oven
- 11 new employees (17 total)
- on-time deliveries
- quality parts

The workforce is well-trained by the experienced machine operators. It takes from one week to learn welding to six months to carry the load on a press.

More automation, demand flow and sheet metal roll stock will change 1997 even more.

Two of Ann Landers' "Notes to teachers":

"Dear School: I hope you will excuse John for being absent on Jan. 28, 29, 30, 31, 32 and also 33."

"Dear Mr Thomas: Jennifer missed school yesterday for a good reason. We forgot to get the Sunday paper off the porch, and when we found it Monday, we thought it was Sunday."

Magnetics

The new D-350 amp was significant to the Magnetics Department too. They produced the first 1000 prototype sets of transformers and chokes. There are eight different part numbers in each set.

Supervisor Al Spencer taught all 37 magnetics employees a basic electricity course. That has helped them understand the technical reasons for doing everything from placing and tightening screws perfectly, to winding and testing transformers.

Powder Coat

Supervisor Paul Ferry posted these statistics for Powder Coat's first anniversary celebration September 25th:

- Total parts processed: 558,248
- Weekly average: 10,736
- Weekly average for last 6 months: 14,294

Paul graphed the quantities produced beginning September 30th, 1995. Slightly more than 1500 parts were coated. The high point was more than 17,000 parts in June and they did 16,000 in August, 1996.

The most difficult thing for experienced painters was that they had to coat, not paint. Instead of spraying one part at a time in a small booth, they now coat up to 100 parts on a rack at a time.

The increase in parts coated has resulted in a need for storage space for the racks and paraphernalia needed to coat an average of 15,000 pieces per week.

Wire Cut

Supervisor Paul Barna reports that kanban, crimp theory and other training, plus new tools, improved efficiency standards and quality have helped Wire Cut make on-time deliveries with fewer defects. They are working toward cell manufacturing in 1997, where a product is completed in one area.

Techron

Manufacturing Manager Ed Revak highlighted this record year for Techron. They achieved the 8645 and GRAM ramp-up by March and maintained production which met a sales rate that was three times more than ever. From nearly \$15 million in 1995, sales will climb to \$50 million for 1996.

This was accomplished at the same time they developed a new quality system and added the Wire-Cut and Magnetics departments. Total personnel went from 59 to 160, including new assemblers, an industrial engineer, and electrical and quality engineers. New supervisors are Tom McConnell and Ralph Tubbs.

Supervisor Tom Arata said the improved cabinet quality and polyphase buck assembly yields are major quality achievements. ISO9000 and Six Sigma loom ahead for 1997. ☐



Above Dr. Philip Summers, President of Vincennes University (left), and Instructor Jim Hoffman (right) congratulated Paul Ferry, Diana Long, Norma Miller and Tina Wade who completed the first "Computers in Business" course offered at Crown last summer. They displayed the collegiate mousepads they were given.

Farewell in Song

by Libby Marshall



Bob Leininger sang "What a Difference You've Made in My Life" during morning assembly November 8th. A corporate-wide cake reception followed, to give Bob a warm send-off to a new job.

Bob Leininger made a difference in Crown's life and that of many production workers, secretaries, techs, engineers and supervisors who have worked with him during his 21 years here. He saw potential in them and gave them opportunities to move into better jobs. He is pleased with their success and values their friendship. Bob said he thinks of them often and misses them.

As one of the principal owners and Manufacturing Director of Advanced Technologies, Inc. (ATI) Bob can still enjoy a company which honors the spiritual needs of employees. A Christian environment and standards of excellence in product development are as refreshing and significant at ATI as at Crown. More than ten ATI employees, including Ross Swinehart and Enos Yoder, former Treasurer and Engineering Manager, respectively, are former Crown friends, softball and tennis partners.

Max Scholfield, former Crown president and founder of ATI, hired Bob as a Purchasing Agent in 1975. He promoted Bob to Purchasing Manager and five or six years later to Production Manager. Bob worked with Dan Lutz, Don Florea, Sheila Cook and others to plan Plant 2A which was built in 1988.

As Production Manager, Bob was famous for getting shipments out when doomsayers said it couldn't be done. Take the needed parts from amps in Finished Goods; borrow personnel from Techron; postpone this work order and rush that one! It was a constant juggling of parts, people and priorities. Bob became creative and we all profited. Bob's soft-spoken toughness and tenacity encouraged staff and production workers.

It was a rare treat for us when Bob took guitar in hand and sang for assemblies. Mellow and heartfelt Christian songs seemed to hold a little more meaning when he sang them.

Bob's wife, Marlene, teaches music and drama at Heritage Middle School in Middlebury and his two sons and daughter all sang in Concord High School choirs. Krista lives and works in San Diego. Todd is attending Ft. Lewis College in Durango, Colorado, and Chad is a freshman at Purdue.

ATI is growing, too, so Bob has challenges ahead and a new playing field. His Crown friends wish him Godspeed. ☐

Milestones Plus

Employees with over 20 years of service were honored at the annual seniority recognition banquet held at the Matterhorn Restaurant November 19th. President Terry Hammond presented the gifts they selected from seniority award catalogs and Clyde Moore, Chairman of the Board, congratulated them and remi-

nisced about their experiences at Crown.

Pictured below left are 25-year employees Paul Gerard, Jim Beattie, Michael Branch and Jim Marks. Not pictured are Cheryl Crow, Shirley Searer and Steve Peer. Below right are 20-year employees.

Seated are (left to right) Ruth Overhulser, Cheryl Deak, Jannifer Smith and Becky Stuber. Standing are Linda Lovitt, Jane Bontrager, Kay Pamachena, Peggy Thomas, Bill Swihart, Sheryl Gingerich, Mabel Healey, Sue Kurtz, Pamm Janowiak and Robert Irvine. ☐



Editor's Note...

Terry Hammond requested that we use his "Memo" space to record this message which I presented December 6th at Crown's Christmas Banquet. He wishes you a Merry Christmas and will join you in working toward a Happy New Year!

There is a famous prayer in Crown's history. It went something like this:

"Lord, we have a problem here! Help us get through it!"

All of Crown's 74 employees heard this on the Friday after Thanksgiving, 1971, except one who had stayed up the night before keeping watch over a smoking ruin that was Crown International.

Twenty-six of those 74 employees still work at Crown. Twenty-five years ago a Thanksgiving Day fire destroyed most of the Crown buildings, but thanks to those 74 employees, the heart and soul of Crown kept right on going.

They found wet, printed circuit board film in a charred desk drawer. They rented temporary, unheated production space. They sprayed disinfectant inside the covers of the DC-300 amplifiers and washed D150s in a dishwasher. They reconstructed templates for making tape recorders one part and one drawing at a time. The prototype industrial amp, the M600, was destroyed, but the improved Techron 7560 replaced it. With toothbrushes and old rags useable parts were salvaged.

The Christmas party was postponed until February. It consisted solely of a carry-in dinner right on the production line. They just ate and talked.

Crown never missed a pay check, but to keep the business going employees gave

up year-end bonuses and accepted Crown stock instead.

Thanks to them for passing on to us a tradition of loyalty and dedication!

There has been no less investment in 1996. We've worked hard and God has blessed us richly. We are enjoying the fruits of that labor. We have grown and we have groaned. We have moved and expanded from one end to the other. Many new employees are running to get up to speed and trying to figure out what we are all about.

Nineteen ninety-seven, our 50th anniversary year, is a springboard to the future! We are ready to celebrate! Throughout the year you'll see 50 weekly events for employees and community awareness. The main event will be an open house tentatively scheduled for early September.

We are setting up a history room to collect materials for a complete history of Crown and expect to document and organize materials in 1997. We will need help piecing together some parts of our history, so you "old-timers" might look for old photos and tell us your stories.

Banners, brochures, mementos and news releases will reach into the community and help make 1997 a memorable year. In all of this we hope to celebrate the contributions of our employees, create community awareness of the value of this company and create customer awareness of our tradition of excellence.

Thank you for helping us make history!

Lm

Customer Service Satisfies

Customers Get a Lot!

Under the terms of Crown International's 3-Year No-Fault™ Full Warranty, two of our customers expected a lot, and that's what they got. The last *Crown Crier* mentioned a PT2 amplifier which was returned, damaged beyond recognition, after falling off a truck. Also a chewed-up CM-312 headset microphone was returned.

Both units were covered by Crown's warranty. Factory Service "Satisfied Customers" and that's the goal!

Customer Comments

From Floyd P. Murray, JukeBox Inc., Woodbridge, NJ: "...I would like to thank Crown International for the expedient and thorough service and repair to my Crown equipment. You were most accommodating to my needs in expediting this repair, and I am grateful and completely satisfied. It is a pleasure to deal with professional and competent people in this business, and again I extend my gratitude."

From Mike Battey to Fred Simms: "I would like to thank all those who helped me receive my new PS amp and pre-amp. As a true Crown fan, I am happy to see that an individual customer is important to your business. ...We need to be careful, because if money is our only reward then we can sacrifice our principles. Success is a celebration of the TEAM. Not who came in first. It is a company like yours that is above the STANDARD. Thank you again for the professional attitude I was shown." 

The CROWN CRIER is published monthly or bi-monthly to inform employees of customer, corporate, departmental and employee news and progress. News and ideas are always welcome.

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Employee Committee Financial Report

Balance as of 12/12/96:

Savings	\$ 45.30
Checking	2,640.13
Total	\$2,685.43