

INFO**MATE**

Introduction

Welcome to the 8th issue of our newsletter. The newsletter is used to send product and information updates to our customers on a regular basis.

PC-Based CNC for a General Motion Control application

An automotive parts manufacturer in North Carolina needed to replace the old CNC control on a glue-dispensing machine as the old control was becoming too difficult to maintain. The high production machine basically did one or two parts; each plastic part required the application of glue along a specific contour. After the glue application, the two individual parts would be bonded (EMA bond) on another machine. A control integrator in the area, Larry Daube, of Daube Engineering of Hickory, North Carolina, replaced the old control with a new **MACHINE**MATE CNC. New SERCOS digital servo drives and motors from **MACHINE**MATE, INC replaced the old drives and motors.

The gluing application could have been handled by a PLC with motion control. However, the **MACHINE**MATE CNC was used for the retrofit because the job was simpler to do and less expensive than using a PLC with motion control. The motion control is already done in the CNC and the complete **MACHINE**MATE CNC package costs less than a PLC with motion control capability and with its IO, a color display, a floppy disk drive, etc. The machine, with its two linear axes and glue head, is shown to the right.



This customer decided to use the **MACHINE**MATE CNC control for this retrofit because of the capabilities that the PC-based CNC brought to the application, in addition to the lower cost. The PC hard drive is more reliable for program storage than the old control's bubble memory. The glue application paths were easily defined in a standard RS274 M/G-code program format. If new parts or design changes to the current parts are ever needed at this machine, the CNC offers the advantage of simply entering a new part program rather than extensive motion program changes for the PLC motion controller. During the course of the control retrofit, the only mechanical work done on the machine was the fabrication of the servo motor adapters.

Larry Daube designed a simple operator panel for the machine. Most of the time, the operator does not even know that the machine has a CNC on it. After clamping the part(s), he simply selects the run of part 1 or 2 (i.e., to the left or right) or both and then pushes cycle start. The CNC runs the appropriate program(s). The operator panel is shown to the right.

Sometimes it is cost-effective to use a PC-based CNC package to do a job often performed by a PLC with motion control. That was the case in this control retrofit.



South-Tec 2002 Trade Show

MACHINEMATE, INC attended SOUTH-TEC 2002, in Charlotte, North Carolina, from March 5 to 7. Nyles Priest displayed several **MACHINE**MATE products in the DOC Machine Tool Services booth 2418. DOC had several of its machines on display, to reflect its capabilities as a complete machine repair and maintenance service, as well as a distributor for several machine tool lines.



Westec 2002 Trade Show

MACHINEMATE, INC had an exhibitor booth (311) at WESTEC 2002, Advanced Productivity Exposition in Los Angeles, California, from March 18 to 21.



Frank Block
President - MHO Corporation



MHO Machine

MHO Corporation, from Oakland, California, a manufacturer of precision high-speed machines for small parts, provided a machine for our booth. The show machine had a 12" x 12" x 6" machining cube and a small horsepower 50,000 RPM spindle. MHO also offers a larger model with an 18" x 18" x 8" cube and has options that include an automatic tool changer and larger or faster spindle motors. A **MACHINE**MATE MM1 controlled the machine. During the show a number of intricate parts were engraved in wax and brass to demonstrate some of the machine's capabilities. Frank Block, President of MHO, helped with the many visitors to the booth. The MHO machine line is used for jewelry molds, graphite electrodes, precision engraving, medical parts, ceramic parts, electronic parts, molds and dies. Repeatabilities are 0.0001" and accuracies are 0.0003". Speeds are typically 300 to 400 IPM.

MACHINEMATE, INC also had on display the two models of the new eCNC product. The horizontal configuration is the same front panel size as the existing models (MM1 through MM7), the 19" rack-mount (and 12.25" height); however now it has the full alphanumeric key set available to the right of the 12.1" color TFT display. The vertical slim-line version has the operator panel in two pieces, both at 11.4" by 8.7". The top half holds the 10.4" color TFT display; the bottom half holds the operator's IP65 membrane keypad (that also includes the full alphanumeric key set). Both models can



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have the industrial PC (in its CE stainless steel case) remotely located up to 33 feet from the operator front panel. The operator panels are only about 2" deep for easier operator pendant layout. Both eCNC models run Microsoft Windows 2000 with the **MACHINE**MATE real-time kernel and come with a modem and also two USB ports (to interface to the wealth of PC devices that are compatible with Windows 2000 via USB).

The modem is standard in an eCNC to complement the new operator interface architecture. The MMI has been rewritten in HTML and JAVA applets. This means the CNC displays can be available over a phone line, enabling both remote access and troubleshooting without an Internet provider – just connect the **MACHINE**MATE to a phone line and call it (from anywhere in the world)! You just need a web browser on your PC – no additional software is required for this feature.

Limited release of the eCNC product is occurring now with the focus primarily on high volume OEM's. Full eCNC product release will be at the end of 2002.

Eastec 2002 Trade Show

MACHINEMATE, INC will have an exhibitor booth, 5220, at the EASTEC 2002 Advanced Productivity Exposition in West Springfield, Massachusetts. The show runs from May 21 to 23 on the Eastern States Exposition Grounds.

Stop and see the new products we will be introducing and learn about our new partnerships. We hope to see you there!



Control Integrator on the Road

One of our integrators recently visited us, traveling in an unusual vehicle – his 40-ft Rockwood Diesel Pusher Motorhome. Harko Schwartz, from Perkasio, Pennsylvania, stopped at our facility on the way back from a control retrofit application he had just completed in New Mexico. Because his rig is 62' long (including his pick-up truck towed behind) he had to park across the street near a shopping center. Rather than flying to the distant jobs, Harko frequently brings his temporary housing with him, as you can see from his picture at right.



Harko visited us for the integrator training class last summer and began a successful lathe control retrofit with a **MACHINE**MATE just a few days later.

Conclusion

If you do not want to receive this newsletter, please tell us with a phone call or just respond with an e-mail with 'unsubscribe' in the subject line. If you received a printed issue and you wish to receive it via e-mail, please tell us that by an e-mail to us at info@machinemate.com or call us at 920-907-0001.

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Our web site www.machinemate.com has lots of information about our products and applications; a link can be provided to our customers for the complete manual set. A number of **MACHINE**MATE control retrofit articles are also available. Please periodically check the site for news.

Thank you,

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