



ELECTRONIC MFG. SERVICES (EMS)

WORLD Electronics and Yamaha: Performance and Service Make the Difference

By Michael L. Martel

For an EMS company, choosing a production equipment supplier comes down to performance and flexibility, equipment reliability, speed of changeovers, and other related factors. But choosing the supplier heavily involves that supplier's reputation for service and support, and the company's continuing dedication. Will that EMS customer remain a loyal customer or continue looking for the right partner?

With more than 20 years spent manufacturing world-class products for major OEMs and high-tech startups, the company's choice has remained Yamaha and Trans-Tec America, Yamaha's service and support team, since its first investment in Yamaha equipment.

From Elevators to EMS: Moving On Up

"WORLD electronics® began as an elevator repair company starting in the early 70s," says Ed Fitzsimmons, WORLD electronics' director of operations. "By the late 1980s we had our own product line and we purchased our first SMT line. We soon realized that due to the efficiency of the SMT process, we weren't fully utilizing the machine's capabilities. It was then that we made the decision to get into the EMS business, and it quickly took off from there." He adds, "In 1999 we moved from our original 25,000 ft² facility into our present 90,000 ft² factory. Today we still produce elevator parts, but the EMS business is the focus of the company."

Now, with more than 30 years in the EMS business, the company continues to see steady growth, even with some negative impact from the "dot-com" crash in 2001. "We saw a drop in business, but, it was not 'ugly,'" Fitzsimmons recalls. "We still saw growth during the last downturn where we achieved

a 35 percent increase in revenue between 2006 and 2013. Along with the industry, we have seen the last two years stay steady business-wise, but flat in terms of growth."

Multiple Yamaha Systems

WORLD electronics has already purchased three Yamaha, high-efficiency, modular Z:LEX YSM20 surface-mount systems. They were installed and serviced by Trans-Tec America, Yamaha's agent since 1988. The YSM20 accurately mounts up

to 90,000 components per hour, its high-speed head handles 03015 (0.012 x 0.006 in.) to 45 x 100 mm (1.8 x 3.9 in.) components, and its flexible head can accommodate odd-form components up to 28 mm (1.1 in.) tall. Its 8 mm (0.3 in.) feeders are hot-swappable, and it has innovative features that include a carriage-style automatic tray stacker and intelligent, auto-adjusting electric feeders.

Flexibility is Critical

"Our specialty is high-mix/low-volume applications," says Mike Peffel, manufacturing technology manager at WORLD electronics.

"Customer builds can range from 5-20 boards to a run of 200. We perform 8-10 changeovers per day, spread out across four manufacturing lines." With such a wide range of build sizes and constant changeovers, the flexibility of the production equipment is absolutely critical to keeping production running without missing a beat or creating errors or confusion. "The flexibility of the equipment in terms of handling product changeovers is certainly one of the most important considerations in choosing the production equipment for our lines, and it is one reason why we chose Yamaha mounters," he adds. "Other reasons included the overall robustness of the machines, and the infre-



Mike Peffel, manufacturing technology manager (left) and Ed Fitzsimmons, director of operations (right) of WORLD electronics.

quency of failure. The Yamaha equipment is very reliable with very little downtime, and in our high-mix manufac-



Feeders lined up to handle the full high-mix range of SMT builds at WORLD electronics.

turing environment, any down time that isn't necessary is hurtful. In more than five years of operation, the lines are running constantly with the only downtime being when we do monthly PM on the entire line."

Even then, a lack of unnecessary complexity simplifies matters. "Another key reason is that the machine is very easy to work with, which simplifies changeover as well as maintenance," Peffel says. "Everything inside the machine is labeled and well laid out. I like the fact that I can address anything on the machine with either a screwdriver or a set of Allen wrenches."

Support and Communication

It is sometimes said that when buying production technology, customers should also realize that what they are buying extends beyond the machine to the whole company, a partnership team of engineering, service, and support professionals. Fitzsimmons says that this

factor is what made Yamaha an easy choice. "Support and communication have been key reasons why we choose Yamaha," he says. "With our previous vendor, this was a serious issue. Now we make a call and all our issues are addressed immediately."

Yamaha equipment is represented by Trans-Tec America, which supports all Yamaha SMT products in the U.S., Canada and Mexico. The company is one of the longest-standing global partners for integrated modular assembly lines worldwide. The company provides world-class engineering services and has a team of technical support experts available around-the-clock.

"We've had consistent support from Trans-Tec and Yamaha," Fitzsimmons continues. "For example, we had a piece of older equipment fail suddenly. Trans-Tec and Yamaha were able to expedite the delivery of a new machine, install it and have us up and running again quickly. This kind of service and response is the primary reason why we buy Yamaha."

Fitzsimmons and Peffel stress that the capabilities and performance of the machines, as well as their excellent technology have reinforced the decision to choose Yamaha. "From the design point of view, there is solid engineering and intelligence built into the machine," says Fitzsimmons. Peffel adds, "I have been around high-end sports cars such as Lamborghinis and Ferraris and those cars are not even built to the same quality as Yamaha builds into their mounter machines. I believe this to be an accurate assessment: Yamaha's build quality is superior."

Peffel adds that overall, the new equipment from Yamaha is far superior in performance when compared to competitive systems, and innovative features have in fact improved their manufactur-

ing performance. He points to the new feeder design, saying that it has had a major positive impact, especially in defect reduction. "The new feeders have specifically addressed and decreased the frequency of mis-picks, a problem that at last has been all but eliminated."



Yamaha Z:LEX YSM20 surface-mount machine.

Fitzsimmons emphasizes, "Here at WORLD electronics, we've had a long and outstanding relationship with Yamaha and Trans-Tec. We have grown together and we are very happy with the path that we are on and the support that we receive. Our future looks bright in partnership with Yamaha and Trans-Tec."

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