

World electronics and YAMAHA: Performance and Service Make the Difference

For an EMS company, choosing production equipment supplier comes down to performance and flexibility; equipment reliability, speed of changeovers, and related factors. But choosing the supplier heavily involves that supplier's reputation for service and support, and their continuing dedication to it decides whether or not that EMS customer will remain a loyal customer of continue looking for the right partner.

For WORLD electronics®, a leading EMS with more than 20 years of experience in manufacturing world-class products for major OEMs and high-tech start-ups, the choice has remained Yamaha, and Yamaha's world-leading service and support team, Trans-Tec America, since their very first investment in Yamaha production equipment.



World electronics' General Manager Ed Fitzsimmons and SMT Production Manager Mike Peffel alongside the YAMAHA YSM20 mounters that have served them so well.

General Manager Ed Fitzsimmons and SMT Production Manager Mike Peffel tell us why.

“World electronics began as an elevator repair company starting in the early 70’s,” relates Ed Fitzsimmons. “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 usage capabilities. It was then 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 sq. /ft. facility into our present 90,000 sq. /ft. facility. Today we still produce elevator parts, but the EMS business is the focus of World Electronics.”



YAMAHA Z:LEX YSM20 high-efficiency modular surface mounter

Now, with more than 30 years in the EMS business, World electronics continues to see steady growth, even with some negative impact from the ‘dot-com’ crash in 2001. “We saw a drop in our business,” Fitzsimmons recalls, “But it was not ‘ugly’. We still saw growth during the last downturn where we achieved a 35% increase

in revenue between 2006 and 2013. As with the industry, we have seen the last 2 years steady business-wise, but flat in terms of growth,” he adds.

Multiple Yamaha Systems

World Electronics has already purchased three (3) Yamaha high-efficiency modular surface mounter Z:LEX YSM20 systems, installed and serviced by Trans-Tec America. The YSM20 accurately mounts 90,000 Components per Hour; its High Speed (HM) Head handles 03015 to 45x100x15mm components, and its Flexible (FM) Head can accommodate odd-form components up to 28mm tall. Its 8mm Feeders are hot swappable, and it offers innovative features including a carriage-style automatic tray stacker and intelligent, auto adjusting electric feeders.

Why Flexibility is Critical

“Our specialty is high mix / low volume applications,” Mike Peffel says. “Customer builds can range from between 5-20 boards to a run of 200. We perform 8-10 changeovers per day, spread out across four (4) 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 handing 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 infrequency of failure. The Yamaha equipment is very reliable with very little downtime, and in our high-mix manufacturing 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.”



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

Even then, a lack of unnecessary complexity simplifies matters. “Another key reason is that the machine is very easy to work with; this 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 one buys production technology, or a machine, they 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. Ed Fitzsimmons says that this factor is precisely 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."



Three (3) YAMAHA Z:LEX YSM20 high-efficiency modular surface mounters in-line at World electronics. Their performance has been continuously supported by the team at Trans-Tec America, the leading distributor of Yamaha SMT equipment solutions in North America.

Yamaha equipment is represented by partner Trans-Tec America, whose team provides superior nationwide support for all Yamaha SMT products in the United States, Canada and Mexico. As the leading distributor of Yamaha SMT equipment solutions in North America, Trans-Tec America is one of the longest-standing global partners for integrated modular assembly lines worldwide. Trans-Tec provides world-class engineering services and has a team of technical support experts available around-the-clock.

"We've had consistent support from TransTec and Yamaha," Ed continues. "For example, we had a piece of older equipment fail suddenly. TransTec 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."

Superior Technology and Quality

Ed and Mike stress that the capabilities and performance of the machines, their innovative features, and superior technology continue to reinforce their decision to choose Yamaha. "From the design point of view, there is solid engineering and intelligence built into the machine," Ed says. "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."

Mike 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 manufacturing performance. Mike 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 improved the frequency of mispicks, a problem that at last has been all but eliminated.”

The ability of the Yamaha system to look and self-calibrate on the fly has dramatically improved productivity. Mike maintains that this innovative feature alone has had the biggest positive impact on production. “The ability, for example, to have an expensive part fail vision recognition, and then give you the option to either reject the part or correct the vision file with the same part reduces waste. On the same note, to have the option to return the part to its original tray saves time and component damage and rejects. . This innovation is an exceptional time and money-saving feature, while at the same time optimizing the process.”

In conclusion, Ed emphasizes that “Here at World Electronics, we’ve have had a long and outstanding relationship with Yamaha and TransTec. 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 TransTec.”

WORLD electronics®
3000 Kutztown Road, Reading, PA 19605
Phone: 800-523-0427 or 610-939-9800
www.world-electronics.com
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