

By Rick Lindquist, N1RL

MFJ: A Silver Anniversary Success Story

MFJ turns 25 this month. Its founder and president, Martin F. Jue, K5FLU, says he's still having fun, and that's what ham radio is all about.

MFJ President Martin F. Jue, K5FLU, admits that a youthful attempt to fabricate a "foxhole radio" using a razor blade and a piece of graphite from a pencil met with failure.

"I spent all my time fooling with radio," he reminisced recently as we spoke in his office in Starkville, Mississippi.

In a very real sense, nothing's changed. Jue, 53, still spends all his time "fooling with radio." But his subsequent radio tinkering eventually led his MFJ Enterprises into the forefront of US ham radio equipment and accessory makers. The company celebrates its 25th anniversary this month.

If you've never met Jue before, it's a bit jarring when this balding, bespectacled Chinese-American approaches you with a big smile, holds out his hand, and says, "Hey! How y'all doin'?" Jue's accent is pure Mississippi Delta, and he doesn't speak a word of Chinese. Jue says his family descended from Chinese immigrants who came to the US to build the transcontinental railroad and established a small enclave in west-central Mississippi.

Martin F. Jue is MFJ Enterprises. In nurturing his company from a two-product sideline venture in 1972 to a thriving endeavor that now sells more than 500 ham radio items, he was only doing what almost came naturally to him.

"I thought everybody had their own business," he said, recalling his childhood in the Delta town of Hollandale where his family ran a neighborhood grocery store. Jue began working there at an age when most kids are just starting elementary school.

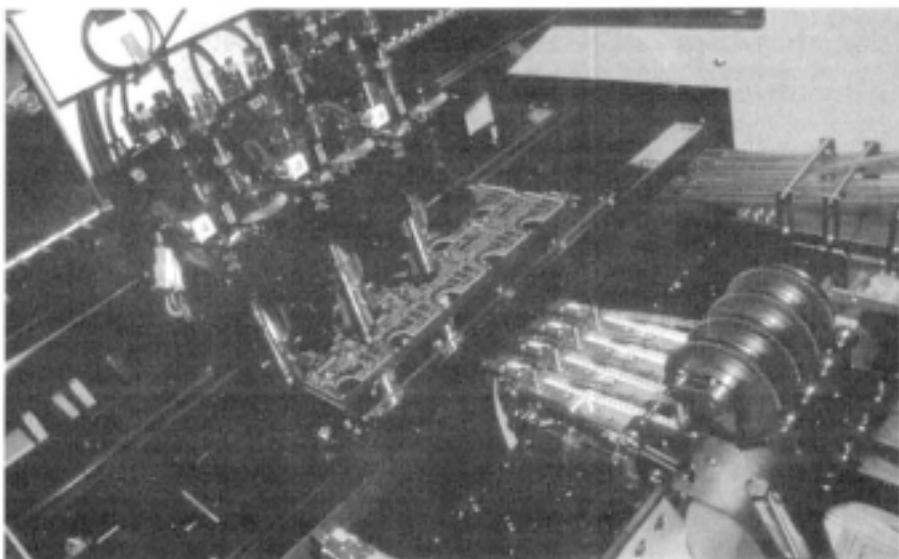
He acquired his taste for ham radio as a youngster, not long after he managed to put together a crystal radio that *did* work. One evening, he overheard his neighbor, Chuck Sudduth, W5VMC(SK), talking on 75 meter AM. Jue learned that Sudduth was the local TV repairman. "I used to go to his shop and just hang around," he said. Eventually, he began helping out in the shop. His persistence paid off. With Sudduth's help, he got his Novice ticket and later his Conditional (a volunteer examiner General ticket once available for those living too far from a regular FCC testing site). Sudduth built Jue an 807 transmitter from old TV parts. Jue still has in his office the same Knightkit Space Spanner he used while learning the code.



MFJ President Martin Jue chats with one of the company's production workers.



MFJ forms all of its own cabinets, panels, and enclosures from sheet metal stock.



New, automated equipment at MFJ applies surface-mount devices to 10 code trainer boards at a time.

Jue calls Morse code "real ham radio." It's no coincidence that a code trainer figures prominently in the MFJ product line (the company recently debuted its Model 418 code trainer). "I want hams to enjoy the code," he said. He's not opposed to lowering the CW requirement, but he doesn't favor eliminating it altogether. "It's so different from what people normally do, which is talk," he explains.

It's no surprise then that one of MFJ's first product offerings in October 1972 was an active CW audio bandpass filter, the CWF-2. The CWF-2 board kit sold for \$9.95—or \$12.95 wired and tested. Later, MFJ built the board into a small Radio Shack box and upped the price to \$19.95, wired and tested. MFJ's first tiny advertisement, in the November 1972 issue of *Ham Radio*, also offered a low-pass filter kit for \$13.95.

It was a modest start for a firm that's become a household name among hams in the US and in several parts of the world (some 25% of the company's business is from overseas sales). Jue arranged for me to stay in the hotel room where MFJ Enterprises was born and lived for its first six months or so and where *everything* was done by hand.

Although it's now a respectable hotel room (the building itself is on the National Register of Historic Places), at the time MFJ occupied these second-floor quarters, the building was in a state of some disrepair. Jue cut a deal with the hotel manager to rent the room for the princely sum of 50 cents a day.

Starkville, a bustling Northeast Mississippi town that's home to Mississippi State University, is replete with former MFJ locations—and even some future ones. We had lunch at the site of two of MFJ's major growth spurts. It's now a popular eatery, but the building once housed a printing shop, and MFJ at first occupied the rear quarters, then—the second time around—the whole building (a house trailer served an interim stint as MFJ headquarters, until the PC board chemicals ruined the plumbing). Jue and his vice president for manufacturing, Steven Pan, KF5C, pointed out back in the kitchen an area where their "executive suite" once stood. Desks were of construction lumber. "We shared a telephone," Pan recalled. Hookup wire was scrounged from the stuff the local telephone repairmen would discard.

In these early years, Jue hung onto his day job on the faculty of MSU (he holds a BSEE degree from MSU and an MSEE from Georgia Tech). He took advantage of an abundant supply of student labor in his Electrical Engineering department to wire up the boards. That's how he connected with Pan, a native of Malaysia who wound up in Jue's classes at MSU. Pan says he couldn't get a job when he graduated because he was not a US citizen. Jue took him on at minimum wage as a helper, and Pan became an integral component of MFJ's ultimate success. As Jue tells it, Pan started out figuring out how to improve the silk-screening process and "pretty soon he was doing everything."

Among the growing pains Jue remembers were malformed aluminum enclosures (the company had to start making its own boxes after Radio Shack discontinued its product), paint that wouldn't dry, and a transient labor force. The MFJ staff once moistened address labels for 10,000 flyers the old-fashioned way—by licking them!

By the late 1970s, Jue felt confident enough to quit his faculty position and cast his lot with MFJ as the company blossomed, then bore fruit.

Jue says one smart move the fledgling firm made was to install an incoming WATS line to take orders—this at a time when only a handful of major ham radio dealers had them because of the high cost. The result was that sales in the following month alone equaled the total of the previous year. By now, MFJ had graduated to manufacturing antenna tuners, keyers, crystal calibrators, QRP transmitters and other items.

When a former skating rink-cum-honky



MFJ fabricates its own silk screens to apply lettering to enclosures. Silk screening is still a largely manual process.

tonk became available, Jue borrowed some money and snatched it up to be the company's first real headquarters and manufacturing facility. The company got metal forming machinery and even bought a printing press to publish its own instruction books. MFJ still occupies the site for some operations.

One of the most striking things about MFJ is the degree to which the company fabricates components it needs instead of buying them. Among other things, MFJ makes many of its own variable capacitors, forms the tubing for its various small loop antennas, builds its own roller inductors for antenna tuners, designs and makes its own PC boards, constructs its own cabinets and enclosures, and even has an extrusion press to make small plastic parts.

Although he'll deny being a real estate mogul, Jue today owns a number of sites in Starkville, including a building and property adjacent to MFJ's primary location in Starkville's industrial park. Jue plans to move his engineering department and other operations there. He also holds land next to the former skating rink facility. As we drove along a busy commercial strip, Jue pointed out a section that he used to own but had sold.

MFJ Enterprises today includes Ameritron (HF linear amplifiers), Mirage (VHF and UHF amplifiers) and Vecronics (a "premium" line of MFJ-type products which MFJ acquired just last year in a move to buy out the competition). Each company operates as a separate division and has its own corporate culture. "We have done well," Jue says.

Still, there's nothing flashy or overbearing about Jue, who drives a mid-1980s vintage Buick Park Avenue and often wears blue Oxford cloth shirts (open at the collar), casual slacks, and loafers. He has metal-framed glasses. He speaks softly and efficiently. While he can cover a lot of ground in the course of a day, he never seems to be in a hurry and always has time to chat with any of the 200 or so workers on the factory floor. Many he knows by first name. They call him "Sir" or "Mr. Jue."

At one point in our tour, Jue turned off a fan in an unoccupied office "to save some money on electricity." The little

economies all add up.

Jue concedes that he used to be a hard guy to work for but says he's changed now. "I figured I'd best not be like that," he explained. These days, he's not likely to show up at his office before 10 AM or so. But he's often the last one out the door in the evening. Jue still enjoys fiddling with new product ideas and prototypes in a little cubbyhole in his office.

Jue married his wife, Betty Lou, in 1975. The couple has a daughter, Deanna, who's in high school.

His first ad for a fulltime employee drew 300 replies back in the 1970s, but today Jue says MFJ has problems getting people to live in Starkville, and some MFJ product designers live in other states altogether. Jue says MFJ recruits its factory workforce locally, and he's had better luck recruiting spouses of faculty and students than students themselves. The MFJ workforce is as racially and culturally diverse as any you'll find.

MFJ's 13 production lines operate on a "single piece flow" paradigm—MFJ's version of the "just-in-time" approach to production—coupled with what's popularly called "employee empowerment." Each production line only produces the products it has orders for, with a small margin to satisfy anticipated orders. Jue says his production line leaders "make the decisions on everything related to the process," including ordering parts and supplies, scheduling the work, and shipping the product out the door.

The result, he says, has been improved productivity, reduced space requirements, and increased quality. Even products like Ameritron and Vecronics HF linears are "built on demand." Gone are the days of one-year back orders, according to Jue. "It's made a tremendous difference."

A continued drive toward automation at MFJ also has made a big difference. MFJ recently invested around a quarter of a million dollars in surface-mount technology. The time saving is dramatic. Where it used to take three days on the line to stuff 25 boards for the MFJ-784B DSP filter, the SMD machine does the same work in three minutes.

Putting MFJ's production into the hands of the employees also has freed time for new product development. Jue says MFJ now has some 50 new product ideas in the works.

Jue is fiercely proud of what he's put together in Starkville, and he's pleased to be a part of the local economy. "We're not standing around in bare feet with mud squishing between our toes like some people think," he says.

You won't find Jue among the naysayers of the ham radio industry either. He's an optimist who thinks talk of competition for the hobby from the Internet or cellular telephones is bunk. "Ham radio is not about *talking* to somebody. It's about *playing* with it." And Jue is banking that ham radio will always be with us—in part because he provides so many of the toys.

For more information on MFJ Enterprises, check out the company's new Web site at <http://www.mfjenterprises.com> or call 601-323-5869.

All photos by the author.

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