

With J-10, China Finally On Course In Military Export Field

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INVESTOR'S BUSINESS DAILY

Posted 4/3/2007

It has swept-back wings, small fins near its nose and a turbofan engine. It knocks down enemy planes with missiles and guns, or bombs targets on the ground.

It's called the Jian-10 or J-10 (Jian means fighter in Chinese), and it's China's answer to the most advanced models of the U.S. F-16 fighter, an almost-outdated plane that entered service in the late 1970s.

China unveiled the aircraft at the start of this year — after developing it in a top-secret project that began in 1986. Newscasts from China over the last three months have been filled with shots of the J-10 doing aerial acrobatics, replete with martial music hailing the feat.

Since the unveiling, analysts have been buzzing about the J-10. But many experts say the J-10 presents more of a threat to U.S. aerospace makers like **Boeing** ([BA](#)) and **Lockheed Martin**, ([LMT](#)) which might compete against it on the world export market, than to the U.S. military.

Some defense technology observers say the J-10 represents China's first real attempt to compete with the U.S. and Russia in selling advanced warplanes.

And it's a big market. Research firm Forecast International estimates that from 2006 to 2015, world fighter, attack and trainer aircraft production will total 3,865 planes valued at \$155.9 billion.

Charles Edelstenne, the chairman of French fighter maker Dassault Aviation, estimated in an interview last year that out of the 20,000 fighters maintained by air forces worldwide, about 8,000-10,000 will have to be replaced or upgraded over the next eight years.

Analysts say some nations in Asia, Europe or Latin America might choose the J-10 over U.S. or Russian models because of cost vs. performance factors.

Can Track Like F-16

The sleek J-10 might well be the first Chinese-produced fighter that matches many modern Western fighters in performance, say many observers.

China will say nothing about the J-10's performance. But Western news reports say it can hug the ground to duck radar and then climb at supersonic speeds to attack enemy planes. It also tracks multiple targets via computers, much like the F-16.

"There is a lot we still don't know about the J-10, particularly the quality of its radar, what kinds of armaments it will carry, how good they are and how stealthy it might be," said Richard Bitzinger, a senior fellow at the S. Rajaratnam School of International Studies in Singapore.

Bitzinger, an Asian defense expert, says the J-10 probably has some radar-reduction materials or coatings on its skin that make it tough to "see" on enemy radar.

Still, analysts say the J-10 is no match for top U.S. fighters like the Boeing-Lockheed F-22 Raptor. Lockheed is also making a plane called the F-35 Joint Strike Fighter that many analysts say will beat anything in the sky for years to come.

"Everyone is treating the J-10 like some kind of surprise and major ratcheting-up of Chinese military prowess. But basically, it's a glorified, advanced F-16," Bitzinger said. "It's an improvement over what the Chinese Air Force currently flies, something roughly comparable to what many other Asian air forces fly. But it's hardly state of the art."

China began secretly deploying the plane inside China in 2003, before its coming-out party this year. China already has 100 J-10s in service, and the government is making no secret of its plans to sell the plane on the export market.

The export version of the plane is designated the F-10. It's expected to be cheaper and simpler to operate than U.S. warplanes like Boeing's F/A-18 Super Hornet. It might also be cheaper than the MiG-35, its nearest Russian rival on the world fighter market.

New Jet, But Long History

The J-10 is being produced by China's Chengdu Aircraft Industry Corp. The state-owned company's top-secret plants are located in the city of Chengdu in southwest China. The city was the site of a U.S. bomber base in World War II and has since become the center of China's aerospace industry.

The story of the J-10 is also a tale cloaked in mystery that befits a Tom Clancy spy novel.

"The J-10's airframe, or body, is based on a design for an Israeli fighter called the Lavi," said Shlomo Aronson, a political science professor at Hebrew University in Jerusalem.

Israel first developed the Lavi with help from the U.S. government and aerospace makers in the 1980s under a joint project. It was designed to counter Soviet planes like the MiG-29 that were then being supplied to Arab nations.

Some of the the Lavi's internal weapons, navigation, communications and other technology were based on the U.S. F-16. The Lavi was also powered by an engine supplied by **General Electric**. ([GE](#)) Some major features of the Lavi's airframe also were based on the F-16.

The U.S. later broke with the project after Israel stated its intention to export the plane. U.S. officials believed the Lavi would vie against export models of the F-16.

Israeli plans to develop the Lavi were dumped as a result. But by the 1990s, the Israelis were trying to sell the design for Lavi to the Chinese government, which was developing the J-10.

The U.S. blocked the Israel-China deal, saying the plane's internal systems were based on top-secret U.S. technology.

"The Americans," Aronson noted, didn't object to Israel selling the Lavi's airframe to China, "but they did object to seeing advanced radar (and other systems) going to China." In the end, only the Lavi's airframe was used in the new Chinese fighter.

Aronson says the Chinese also got pointers from Israel in making the J-10 operate in hot, arid desert conditions. He says parts of Israel and China have similar climates. The Israelis have technology that keeps planes flying in such weather.

The Chinese also ended up powering the plane by buying Russian-made turbofan engines.

Thus, China might now export a spinoff of a plane the U.S. stopped Israel from selling on the world market more than a decade ago.

John Pike, head of defense research firm GlobalSecurity.org, says it's wrong to dismiss the J-10 as an Israeli copy.

"The J-10 has Chinese characteristics," Pike said. "The lines (on its airframe) are indigenous. It's not a copy from anything else."

He says the key is to recognize that China has reached a point where it can develop warplanes that aren't knockoffs of models from other nations.

Pike says the J-10 is highly maneuverable, much like the best versions of the F-16. He says the J-10 also carries a cannon for dogfights. But he notes these two features are also the Chinese plane's weak points.

"Maneuverability or cannon don't do the J-10 much good. A (U.S.) F-22 or F-35 can kill it with a missile long before it gets in visual range," Pike said.

But top U.S. planes like the F-22 have high price tags. The F-22, for example, could cost up to \$130 million per plane.

The price of advanced U.S. planes, analysts say, might give China a price advantage in exporting weapons like the J-10 to other nations.