



Jake mills a sassafras log. His modified sawmill features a dual exhaust 20-hp Honda engine.

# EZ BOARDWALK Jr.

**You've probably heard it: "It's a Ford/Chevy thing." Some may say that band saw mills all pretty much work the same— "Just pick one with the color you like, and start cutting lumber." But when you look closely at the mills, some real differences are evident. Different engine options, log capacities, frame designs, and control systems give each mill its own particular character.**

**G**ranted, with some mills, the differences are subtle, but the EZ Boardwalk Jr. and the larger EZ Boardwalk 40 both have features that stand out and differentiate at first glance. I visited with EZ Boardwalk creator Ed Zimmerman at a farm show near Pittsburg, Kansas, to get a first-hand tour.

The first thing that stands out is how the blade meets the wood at an angle instead of straight across. Although it looks odd, it has a definite advantage in that the saw blade actually pulls the sawmill forward as it cuts. While not exactly a power feed, it certainly takes a lot of the effort out of pushing the mill through the wood. Ed

explained that the sawyer should be able to push the blade through the wood with one finger. If you need to use two fingers, the blade is dull!

A coil spring, much like an overhead garage door opener, is perched atop the mill to take the effort out of raising and lowering the carriage. According to Ed, it is balanced for the weight of the engine and band wheels. To raise and lower it, the sawyer releases a brake lever with one hand while cranking the carriage up or down with the other. Engaging the brake securely locks the blade height. The band wheel clutch mechanism is also unique. A lever slides the engine sideways on its support

## EZ BOARDWALK Jr.

Max log diameter .....	30 in.
Max width of cut .....	24 in.
Max cutting length.....	12 ft. 2 in.
Towing package.....	optional—single axle
Band wheel diameter .....	19 in.
Band wheel surface .....	tight belt
Band tensioning .....	spring mechanical
Setworks .....	manual—coil spring assist
Carriage feed .....	manual—assisted by the blade
Power .....	13-hp Honda or 14-hp Kohler
Base Price.....	\$4,200
Options.....	5 ft. or 10 ft. extension—other lengths on request
Contact info .....	EZ Boardwalk Band Saw mills, 7959 Shelby #348, Emden, MO 63439
Phone.....	573/633-2135
Website .....	www.ezboardwalk.com



Ed Zimmerman demonstrates the EZ Boardwalk Jr. To set the carriage height, he releases the brake with his left hand while cranking with his right. The coil spring is designed to balance the weight of the engine and band wheels.



Frame-mounted throttle control is one of the new features of the mill based on customer suggestions.

to tighten the belt to the band wheel. The lever over-centers enough to lock in place. The mechanism is easy to adjust and gives a positive link between the engine and the band wheel. The lever also opens the blade lube valve so that the blade lube flows only when the blade is turning. A nudge on the lever disengages the band wheel and the blade coasts to a stop within a few seconds so that the sawyer

can safely work around the mill.

Most sawyers have had their ears assaulted by the screech of metal against metal when they left the log stops or clamps up a little too high, or dropped the blade a little too low. The EZ Boardwalk has an ingenious device to prevent these unwanted encounters between the blade and the sawmill. An iron rod on the side of the mill catches on the log stop before the blade can

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**Engine:** 50 to 170 HP or PTO Drive with user's tractor.

**Hydraulics:** Commercial Shearing.

**Splitter:** 35 - 45 tons, 3-5 second cycle time; 2, 4, 6, 8, 10, 12, 14 & 21 way pkg wedge. Capacity: 4" to 27" Log diameter: 0" to 48" Block Length. Lifetime warranty on the entire splitter chamber.

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**Clean out Hopper:** Get rid of bark and wood slivers before being conveyed away.

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Jake's hydraulic log turner was made out of parts that he scrounged up and fabricated. The claw doubles as a log clamp.



Close-up of the blade catcher that stops the forward movement of the carriage if the blade is low enough to hit a log stop.

cut into it. The rod extends 1/8 inch below the blade to give a margin of safety. The clamps raise and lower with the log stops, so they are protected from the blade, as well.

Asked where he gets ideas for improvements to the mill, Ed simply replied that he listens to his customers. For example, a customer suggested mounting the throttle control on the frame of the mill, which is now a standard feature. Sometimes, however, the answer is “no.” “The most common request is for a larger engine option,” he told me. According to Ed, the mill is designed for a 13-hp Honda or 14-hp Kohler and

logs up to 18 inches in diameter. “It will cut a 30-inch log just fine, though it is a little slow,” he explained. “The modification to the frame, additional weight, and different pulley ratios would make a larger engine difficult to install, though I have heard that a few customers have done it.”

## Hackberry Jake's Mill

Jake Smith is one such customer. When the editors of *Sawmill & Woodlot Management* magazine asked me to write a review of the EZ Boardwalk Jr. sawmill, I knew just the machine I wanted to observe. Jake (aka “Hackberry Jake” on the Forestry Forum) always has good advice for other forum members and interesting commentary on sawmilling. His sawmill is in a rural area in the foothills of the Ozark Mountains on the edge of the White Rock National Forest in northwest Arkansas. In the woods surrounding is a mixture of Ozark hardwoods, including oak, hickory, cherry, locust, walnut, sycamore—and hackberry. As my car clawed its way up the last mile of gravel road leading to his house, I thought of a bumper sticker that read “Paddle faster... I hear banjos!”

Like many sawmill operators, Jake is an innovator who isn't satisfied with the way things come out of the box. He developed his mechanical skills working on cars while growing up. “If you couldn't fix a car, you didn't drive,” he recalled. The first thing he showed me in his shop was a recently completed computer-controlled router, which he designed and built from scratch, much of it from salvaged materials. Using a combination of a timing belt, threaded rods, and stepper motors connected to a computer running CAM (computer aided manufacturing) software, he has made a few signs with it, but plans to use it to cut wood for furniture parts. “I'm not very good with a scroll saw or band saw,” he admitted, “but I can draw it up

and let the machine do the work.”

Jake's EZ Boardwalk Jr. mill is housed in a shed which he built from wood he had cut with the mill. On the deck was a 14-inch-diameter sassafras log. Even though he runs the mill in his spare time, he has managed to get in quite a bit of milling during the three years that he has owned the sawmill. “I mainly bought this mill based on the price and how sturdy it was built,” he told me. “I wanted something cheap, but not made out of angle iron. I just saw the mill on the Forestry Forum.” Even though he had never even seen a small band saw before bringing this one home, he soon had it set up and was milling lumber for the sawmill shed.

It didn't take Jake long before he was pushing the mill through logs that maxed it out. Thirteen horsepower just wasn't going to do the job for him. After consulting with Ed Zimmerman and getting



EZ Boardwalk designer Ed Zimmerman demonstrates the EZ boardwalk Jr. Notice the angle of the blade, which helps feed the mill through the wood.

the usual “I don't recommend it,” Jake purchased a 20-hp Honda and made the necessary modifications. “It makes a big difference on the big logs,” he told me. The controls still work smoothly, but the weight of the engine is a little more than the coil springs were designed to

hold, so the head rig tends to drop rather quickly if you don't hold on to the blade height crank when you release the brake. With the brake engaged, however, the blade height is securely locked in. As if to answer the question of how well this modification works, he showed me a stack of 18-inch-wide Osage orange lumber air drying behind the mill shed.

Another modification Jake made to his mill was the addition of a hydraulic log turner. Again, putting his skills at designing, welding, and salvaging to good use, he pieced together a claw turner with a pair of valves controlling the shoulder and elbow joints. "Pineywoods on the forum was a real help in designing the turner," he explained, "though I had to make a few modifications to use the parts I scrounged." Flipping on a switch to turn on the electric hydraulic pump, he deftly rotated the sassafras log and clamped it down with the claw. He then made

the mistake of inviting me to try it. After nearly flipping the log off the side of the mill, I managed to wrestle it around to the desired position.

Before firing up the mill, he handed me a pair of ear plugs. The EZ Boardwalk is a very quiet-running machine, but I figured I should humor him, so I put them in. As soon as he started up the engine, I understood the reason. With no room for a conventional muffler, he had installed a lawn-mower muffler on each cylinder. "Kinda sounds like a Harley, doesn't it?" he hollered proudly.

Sassafras is great wood to mill. Easy to cut, smells nice, and has beautiful honey-brown grain. The mill sliced through the 14-inch-diameter log effortlessly. After squaring it into a cant, he gave me a turn at it. It took a while to get the sequence—disengage the brake, set the blade height, throttle up, engage the clutch, start milling. I gave it the one-finger

test that Ed had described. Yes, the blade does cut through the wood with just the push of one finger! With the 20-hp engine, Jake told me, he actually has to hold the mill back when cutting large logs, because the angle of the blade pulls so hard.

Although he has a full-time job with a printing company, Jake manages to work on the mill most weekends, and recently finished a job cutting cherry paneling for a customer. He just came across a quantity of pine logs that he plans to mill for a much more important customer. "I'll mill it into construction lumber for a house," he told me. "My fiancé has let me know that she isn't going to live in a mobile home for long!" ■

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*Dave Boyt has a BS degree in Forest Management and an MS in Wood Technology. He manages a tree farm (2006 Missouri Tree Farm of the Year), and operates a band saw sawmill.*

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