

## Turning Wood Pallets Into Kindling

"It's a low-cost way to get kindling for your woodstove or fireplace. All you need is an ordinary wood pallet, which you can usually find for free," says Marc Olander, Tolland, Conn.

His Pallet Kindling Creator holds cut-up pieces of pallet wood, making it easy to split them into kindling-size chunks with an axe. It consists of a 1 1/2-ft. long rectangular wooden box made from 2 by 4's spaced about 1 in. apart and screwed to a plywood base. Rubber strips are screwed on top of both sides to keep them from getting dinged up while using the axe.

To cut up the pallet, place it on a waist-level flat surface and use a chop saw or sawzall to cut off the cross members. Then turn the pallet upside down and repeat the process, which will leave you with 3 long pieces. Use an axe to split the cross members into small pieces for kindling. You can cut the long pieces into "pallet logs" and use them like firewood.

"I use it all winter long. It's a free source of both kindling and supplemental firewood, and I'm not wasting any wood," says Olander. "I usually cut the long sections into thirds so I end up with 9 'pallet logs' from each pallet.

"I came up with the idea because I have a fireplace insert and heat my house all winter with supplemental heat and have to start the fire every day. I make my own firewood but I usually don't have enough leftover kindling. Pallet wood is thin and really dry, so the fire gets started immediately when it's used as kindling."

Not all pallets can be used to make kindling this way, says Olander. "You don't want to use pallets that have been chemically treated or have oil, paint or any other toxic substance on them. Also, be sure to choose pieces that are free of knots and inspect for nails."

When you're done making kindling you can use the Pallet Kindling Creator to store your axe, notes Olander.



**Pallet Kindling Creator holds cut-up pieces of pallet wood, making it easy to split them into kindling-size chunks with an axe.**



**To cut up the pallet Olander uses a chop saw to cut off the cross members, then turns the pallet upside down to repeat the process.**

You can find the Pallet Kindling Creator for \$25 plus S&H on eBay.

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## Put Sunlight Where You Want It

You can transmit light to dark spaces with a new "heliostat" that has petal-shaped mirrors mounted on a solar-powered tracking device. It reflects a focused beam of light through a window or it can be transmitted through fiber optic light tubes.

"It reflects a beam of light into your house, barn or shed or wherever you need extra light," says John Koger, Wikoda, Inc. "We don't concentrate the light. Our mirrors are flat, so they just reflect the sunlight as is, which means there isn't a fire danger."

The 3-ft. diameter heliostat has 6 triangular mirrors mounted around the solar cell powering unit. Once the heliostat has been focused on a particular area, it tracks the sun as it moves across the sky. Each mirror snaps in place, allowing easy removal in the summer if less reflected light is desired.

The total mirror surface area is about equal to the surface area of a 42-in. TV screen. At about 30 ft. from the heliostat, the reflected area will be about the same. The light could be gathered at that point and distributed around a house via fiber optic tubes or light tubes. Most users simply aim it at a window. Hanging a white sheet or opaque glass plate in front of the reflected light will disperse it around a larger area.

"Some people use heliostats to help with plant growth inside or even with outdoor plants that don't get enough sun to bloom where they are," says Koger.

The heliostat reflects up to 50,000 lumens of sunlight, equal to about 50 60-watt bulbs. Based on 15¢/kW hour, Wikoda estimates



**Petal-shaped mirrors mount on a solar-powered tracking device and reflect a focused beam of light anywhere you need it.**

the \$299 unit will produce \$200 to \$600 in light per year, depending on local conditions. A test stand for temporary positioning adds another \$50 to the investment.

Visit [www.farmshow.com](http://www.farmshow.com) to link to a video showing how the home heliostat works.

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**Log splitter is chained to tractor's loader bucket, with quick-connect hydraulic hoses running to tractor's 3-pt.-mounted backhoe.**

## 3-Pt. Mounted Backhoe Powered By Log Splitter

Roger Vatland of Serena, Ill., uses an ordinary log splitter to power his backhoe. He removed the backhoe from an old self-propelled trencher and made 3-pt. brackets to hook up to his Deere 4400 tractor. The log splitter is chained to the tractor's loader bucket, with quick-connect hydraulic hoses running to the rear-mounted backhoe. He stands on the ground and uses the backhoe's original controls to operate the rig.

"It only takes a few minutes to hook up or take off. If I need the loader, I can quickly roll the log splitter out," says Vatland.

"The 35hp Deere doesn't have remote hydraulics. I already had the log splitter so I removed the cylinder and ram and added a pair of hydraulic hoses and quick-connect couplings."

He used scrap iron to make the 3-pt. mounting bracket, welding 2 new 2-in. receiver hitches to a crossmember to form the lower lift arms.

"To operate, I just hook up the quick connect couplers and start the log splitter. I don't even have to run the tractor so it's nice and quiet," says Vatland. "The log splitter hardly uses any gas so it's economical. I use the backhoe a lot for trenching and burying water lines, and one time I used it to install new piers under an old building.

"The tractor handles the backhoe well. I was worried about the weight, but it turned out to be a perfect match for the tractor.

"I already had the log splitter and backhoe. I spent \$300 for hydraulic hoses and quick couplings. A new 3-pt. mounted backhoe would cost about \$7,000. It might have a little more power and speed, but this is perfect for what I need," notes Vatland.

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**Converted from an old delivery van, "trucktor" is complete with 540 rpm hydraulic pto so the owner can use it to unload chopper boxes at silo.**



## Delivery Van Made Into "Trucktor"

"I cut apart an old medium-duty rental truck for a local farmer who uses it like a tractor," says Chris Lindstrom of Durand, Wis. "The truck has a 6-cyl. Cummins diesel that puts out about 175 horsepower, so it's able to pull chopper boxes, gravity boxes and anything else on wheels that needs to get from one place to another," Lindstrom says.

Lindstrom installed a 2-speed axle that he salvaged from a propane truck, so it has plenty of power to pull loaded wagons that weigh 3 to 5 tons. He also set the truck up with a 540 rpm hydraulic pto so the farmer can unload chopper boxes at the silo. "It works just like a tractor, at a fraction of the cost," Lindstrom says. The rig has normal truck tires with the conventional truck steering on the front and large 48-in. floater tires on the rear to provide extra traction in soft fields.

"When I got the truck frame the farmer had removed the 24-ft. van box and asked me to shorten the frame," Lindstrom said. "I cut about 10 ft. out of the frame, lapped the joints for extra strength and welded it back together. I made a reinforced box frame for the back to mount the hitch. The farmer had bolted 10 tractor wheel weights on the rear frame for ballast."

Lindstrom kept the springs, struts and shocks so the vehicle rides smoothly over rough terrain. The truck is about 18 ft. long and has a turning radius similar to a pickup truck or a farm tractor with a wide front.

Lindstrom kept the truck's original mechanical brakes, which work okay, but the farmer says they require a fair amount of maintenance. If he does this type of project again he'd probably use air brakes.

"The farmer is real happy with his trucktor," says Lindstrom. "I probably put about 60 hours into building it and it cost him about \$4,500 for parts and labor. That's way less than what he'd have to pay for a farm tractor with comparable power."

Lindstrom's regular business is converting single, double and tri-axle trucks into wet and dry manure trucks or TMR feeding trucks. Trucks are set up with heavy-duty frames, oversize wheels, live hydraulics and 1,000 rpm pto shafts for spreading manure or running augers that mix and unload cattle feed.

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