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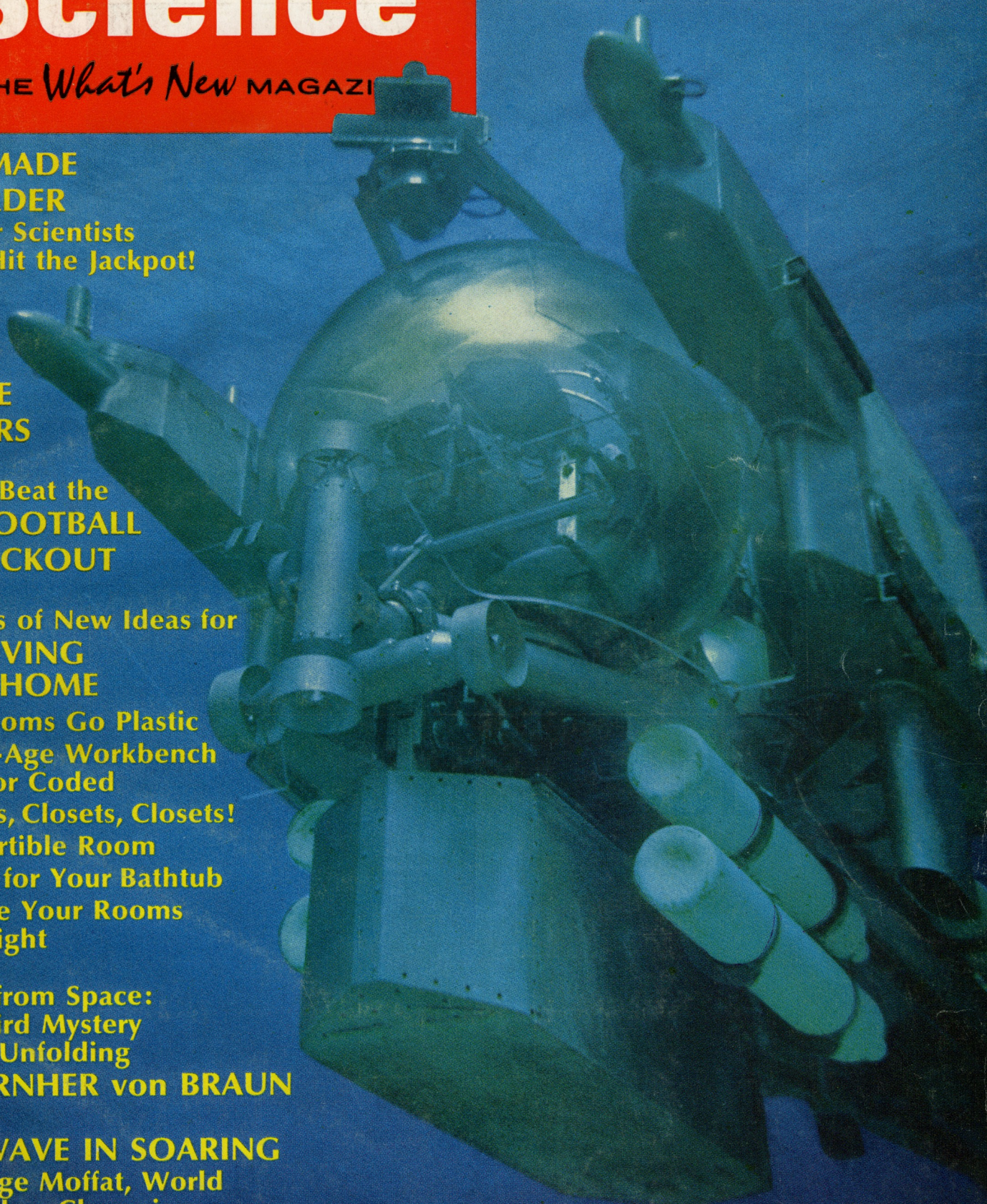
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Steady, smooth torque and low center of gravity help the Electric 90 on hills.

Now: An Electric Rider for Silent Mowing

Here's a quiet, fume-free way to tackle your lawn

By E. F. LINDSLEY / PS Midwest Editor

Don't be surprised if next spring you see your neighbor roll out a handsome green and yellow riding mower, turn a key, and be off and mowing without a sound. Missing will

be the gas cans, funnels, oil, tugging on the starter, and the familiar noise and fumes. He'll be one of the first to have the new John Deere Electric 90 riding mower, but you'd never guess it from appearance or performance. Deere's Electric 90:

- Looks like any conventional, well-styled riding mower.
- Performs as well—in some ways better—than gas-powered riders.

- Costs about the same as a seven-horse lawn tractor.
- Has three speeds forward to five mph; reverse, and conventional clutch/brake.
- Cuts for approximately 1½ hours (about an acre) on a single charge.
- Recharges to 80 percent in five hours, 100 percent in 12, at a cost of no more than 10 cents—no matter what your electric rate is. Average cost is five to seven cents.

What's it like to drive the John Deere riding mower? Try it with me and you'll find the electric wonderfully simple and satisfying after you get over old habits of driving with one ear cocked for the exhaust noise. Just depress the left pedal to disengage the clutch and turn the car-type key to start. The traction motor won't start if the clutch is engaged.

Now, with the traction motor humming softly, select any of the three forward gears in the familiar "H" shift gate, ease out the clutch pedal, and roll out smoothly. To stop, simply depress the clutch. To really stop, use the right-foot brake pedal exactly as in a car.

Cutting some grass. Set your cutter deck to the height you want with the lift control on the right of the steering column, flick the mower switch with your left hand, and the two mower motors will start instantly. You'll hear the blades whirr as they cut a full 34-inch swath, but that's all you'll hear.

You'll feel sure and secure, even the first time you use the machine. All mower functions, balance, and controls meet ANSI safety standards. The mower blades cannot be started unless the traction motor is running. They stop in three seconds or less after you cut the switch.

Get the feel of the blissfully quiet performance in low gear or second, then bump the shift into third and move along at a grass-eating pace of a full five miles per hour. To slow down for tight spots, ease the clutch momentarily. This wears the drive belt a trifle, as it does on all belt-clutch mowers, but it's safe and convenient, and replacing a belt now and then is no great problem.

Try a hill. By now, you'll have found that the Electric 90 has no "tricks," no built-in electric pacemakers, no confusing gauges. You're ready for some tougher going on hills and slopes. Pick a hill that would make your seven-hp gasoline mower grunt. Nose up the bank. You'll be impressed by the uncomplaining torque that feels as if it could climb a wall.

I found I could get in trouble here. With the front end pointed up a 40-degree slope my courage failed and I

Continued



Transaxle on the 90 is controlled by standard H-pattern shift. Top speed: five mph.

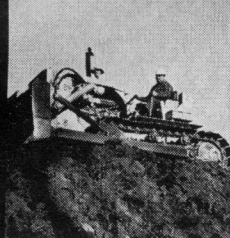


Cutter height adjusts on right hand. Depress clutch before starting motor.



Key start and mower switch are only power controls. Movement engages mowers.

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eased off the clutch, then dropped it in again. The front wheels came off the ground momentarily. I should have used the foot brake to control the back roll.

Prudence and common sense on side hills are the mark of a skilled operator, but you'll find the electric with its low center of gravity remarkably stable. I took it to the raw edge of tipping, but the machine was canted so steeply that I can't imagine anyone approaching this angle in normal use.

Battery life. Obviously, if you run it long enough, the three 12-volt batteries in the Electric 90 will weaken. This shows up first in cutter-blade power, but you'll always have enough reserve traction power to drive back to your garage or other charging point.

John Deere points out that the electric mower is not intended to run all day in massive cutting operations. On the other hand, 1½ hours of steady going will chop a heap of grass around the average homestead, and the freedom from noise and vibration is fair compensation.

Technical details of the Electric 90 emphasize a straightforward practicality and freedom from the exotic that should give long and trouble-free service. The three 12-volt batteries are especially designed to give long cycle life and take repeated deep discharge. They carry a full two-year warranty, with a third year prorated. Replacement cost is \$105 for the set.

Direct blade drive. Traction power comes from a permanent-magnet, two-pole, 36-volt motor running at a peak of 2,400 rpm. Otherwise, the mower is conventional, with a belt drive and tensioner clutch driving a three-speed and reverse transaxle. Nothing here to run up a big bill at the repair shop. The two 3,200-rpm, ½-hp mower motors drive the blades directly. No belts or complex drives are needed.

One advantage of electric drive is self-protection against overload dam-

age. The traction motor on Deere's electric has a thermal overload cut-out; the mower motors have current-overload cutout devices. The entire electrical system is fused against damage from massive shorts. Thus a foreign object jammed in the cutters or wheel drive will stop the motors before serious overloading occurs. If this happens, you must reset the trips manually after locating the cause.

Plug it in. Recharging the batteries requires no more than flipping up the fiberglass rear deck, plugging into a 115-volt AC outlet, and turning the knob to ON. The tractor is left plugged in year 'round. Every 24 hours, the charger will tickle the batteries for 12 minutes to make up any self-discharge. Normal recharge rate after use reflects the state of the batteries. Other than an occasional look at the battery-water level, no other attention is needed. Mower maintenance, of course, requires normal attention to lubrication and blade sharpening.

Although the Electric 90 is first and foremost a mower, it can handle some extra chores such as pulling a Model 50 dump cart around the yard and pushing a squeegee-edge snow blade for moderate snow removal. The five-cubic-foot, 500-pound-capacity dump cart is \$80, the 38-inch snow blade \$40.

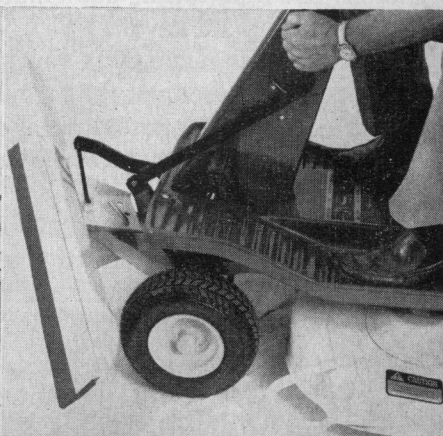
The John Deere Electric 90 rider lists at \$885, the same price as Deere's seven-hp gasoline tractor. It's worth noting that the electric has all the deluxe features as standard, including the deluxe cutter deck, leverage-assisted lift with infinite height adjustment, deluxe seat and trim, foot pads, and a variety of other details that contribute both to convenience and appearance.

Moreover, no price tag can be applied to its safety, freedom from engine and starting problems, quietness and lack of vibration, and instant readiness to operate.

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Batteries and charger are under fiberglass deck. Glow light indicates charging.



Squeegee snow blade with rubber edge is meant for moderate snow. Cost: \$40.