



Been a busy couple of weeks, getting my [5-band HD Spiderbeam](#) assembled and then raising it onto the 14.5 meter [aluminum mast](#). Lots of lessons learned, like most things in ham radio land...

One of the biggest challenges was finding a way to raise the antenna up on the mast. While the HD antenna itself and the stand pipe only weigh about 26 pounds, when you start adding up all those mast sections and the down pressure of the guy lines, it becomes quite a chore – especially if you’re operating solo.

I designed what I’m calling the EasyMast system, which is used for marshaling the antenna on and off the mast, and raising the mast with the antenna mounted on top of it. Essentially, I mounted a [linear actuator](#) atop of a 6 foot galvanized pipe. The linear actuator I chose is capable of raising up to 400 pounds and is powered by 120 VAC.

To connect the linear actuator rod to the mast, I used a PVC rubber-coated chain, along with a 3 inch carriage bolt. The rubber chain is wrapped around the mast 2 times, then the carriage bolt secures it to the actuator’s rod. The actuator then raises the chain up, which binds against the mast, raising the the mast and antenna upward by about 30 inches at a time. Between each actuator lift operation, the mast section’s clamp is tightened, so the mast remains fixed, while lowering the actuator for the next run.

You can see it in operation in this YouTube video below. Worked great! Now I am able to manage my Spiderbeam antenna and mast without pestering my friends to help or wearing myself out and risking injury by attempting to manually raise that heavy antenna and mast system manually (I’m getting too old for that).

I took another video closeup using my iPhone, which provides a better view of the linear actuator raising the mast:



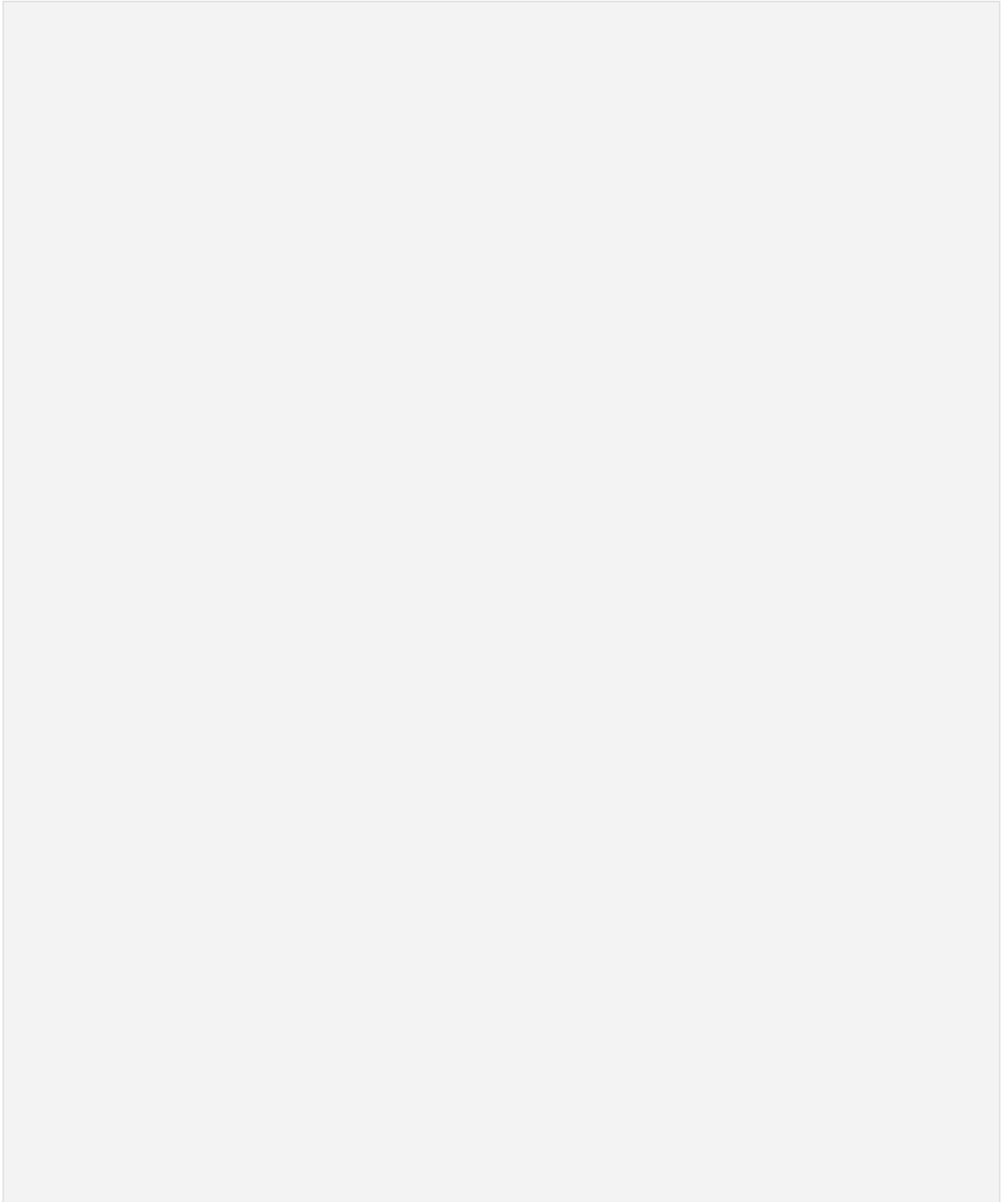
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When I have more time, I will post details on how to construct the EasyMast system, along with photos.

Here's the end product, ready to get on the air!

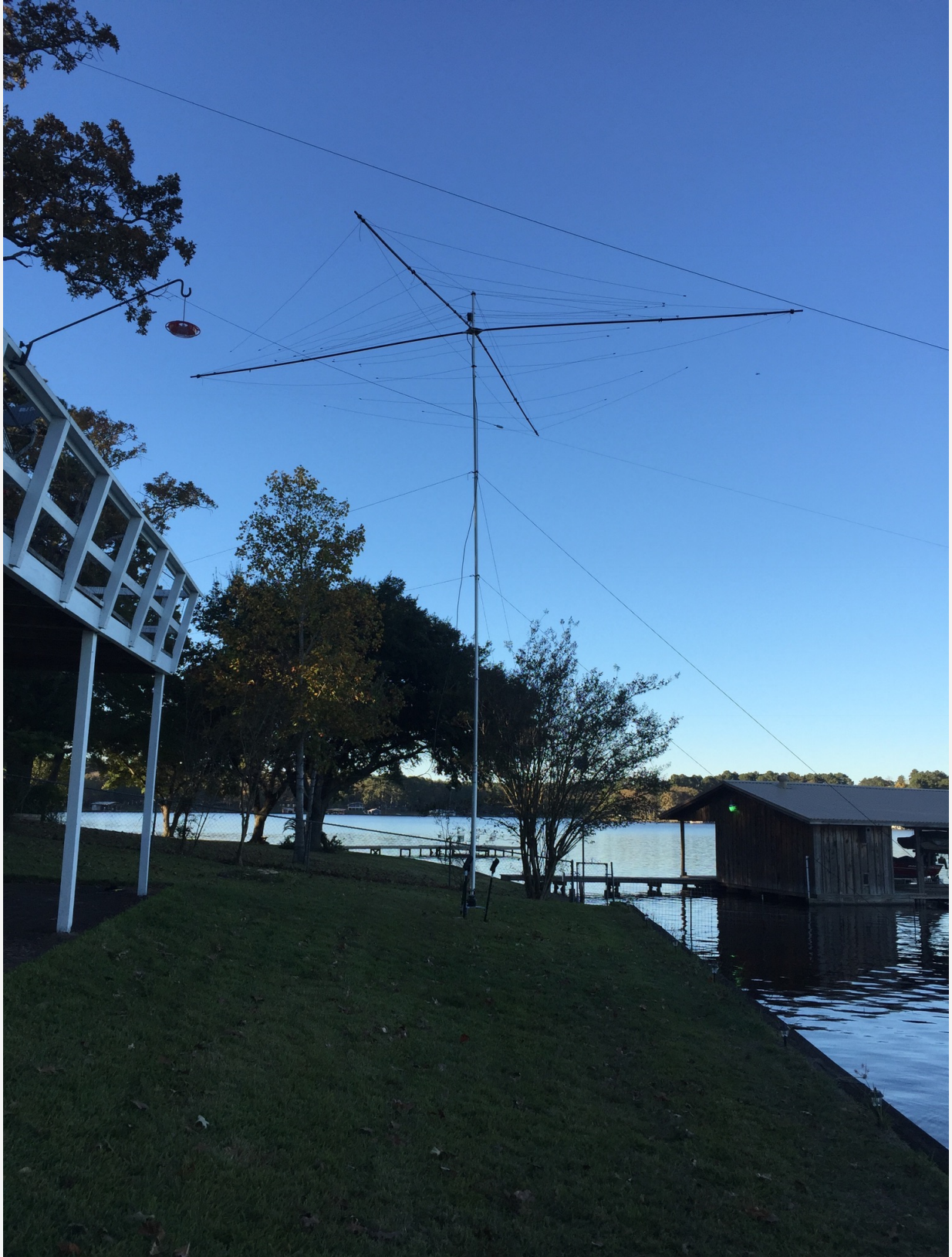


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Spiderbeam 5-band HD