

R/C Channel Chatter

Rapid Winches— A Boon to Glider Guiders

There were 51 entrants in a DCRC Glider contest that was held on June 4. Otto Heidecker's first place performance was unbelievable. He scored 2593 points out of a possible 2600. He got four maxes of 10 minutes each and landed in the circle within 2 seconds of the precise time on each of four flights.

I had the job of contest director for this contest, and from that experience, it is possible to say with some authority that it is time to make some new improvements in the winch systems used for launching.

Bob Denny of DCRC has had some winding brainstormers that work and we're going to describe them after a brief review of the situation during glider meets. On June 4 we put in five rounds of flying during 6-1/2 hours. That's a heap of flights. If you convert it, it means we launched one glider every 1-1/2 minutes during the day. There were six winches in use. And what this means is that there were six hot, thirsty and tired young men out there in the sun most all day and four more were resting in the shade to gather strength to relieve their friends. Without a doubt, this caused more worry for the Contest Manager than any other facet of the meet. None of the retrievers quit, nor did they complain, but still I felt guilty while watching them from my shady nook in the control tent! I kept saying "Something ought to be done. This is too much work for too many people." In addition to winch retrievers, there's a heck of a pile of timers out there in the sun, too. I counted up the number of timers, retrievers, scorekeepers and line officers and arrived at the startling fact that we had more people working at this 51 entrant glider contest than we had working on the flight line at the Doylestown World Championships. And what's more, these people were working harder and more continuously. I was genuinely proud of the gang of DCRC and PGRC members who came forth with a willingness to work and an ability to stick it out to the end.

However, the point to be concerned about is that few clubs can muster the large crew needed for glider meets and unless something is done, there will soon be a diminishing number of contests. The problem is not unlike the situation in pylon racing.

Naturally, I had visions of a better way to do it. One way is to tell the contestants to retrieve their own towlines and also ask them to do some timing. But then the contest goes slowly and at the end of the day at least some competitors would go away saying "Those people ran a lousy contest." Next I toyed with a better idea. Why not put a 0.15 cu. in. engine on the models and give them a 20 second engine run. No winches at all! Also, get rid of the landing bonus. The timers could then sit in shaded chairs at launch points rather than run from winch to landing circle to another winch, etc., all day. In fact, with R.C. gliders, one timer could easily time two or three airplanes simultaneously. (We had 14 timers going steadily all day.)

Instead of 51 competitors, we'd have had a hundred. (Come to think of it, I'm opposed to this idea! We'd be right back at needing an enormous crew of timers and frequency controllers!)

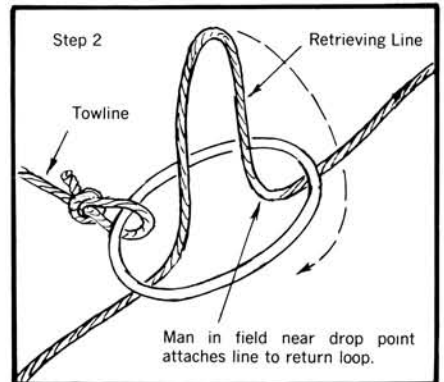
So what else is new? Well, shown here in some sketches are two ideas that Bob Denny of DCRC has generated in an effort to cut down the hard work of retrieving towlines. They are great ideas—so I recommend all glider guiders to study this a little bit.

The first sketch shows how Bob has used two winches for launching during contest. One is used, as normal, to tow up the gliders. The second is used to return the towline to the starting area. This winch is fitted up with a continuous loop of line. It's still necessary to have a helper out at the far end of the winch, but he sits on his tail most of the time rather than hiking back and forth. What he does is to pick up the parachute on the towline and attach it to the return winch by means of a simple loop knot as shown in the sketch. The operator back at the winch station presses the switch and "zingo!", the towline is electrically pulled back into launch position. No muss, no fuss! Nothing is tied on the line taking the gliders into the air. It is a fast way to do the job and is very useful in contest situations.

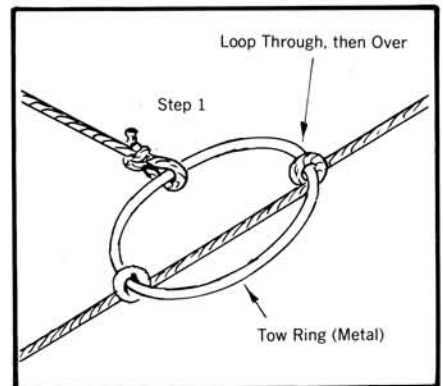
But if you think that's a good idea, wait 'till you see Bob's second idea shown in the other sketch. Here we have instant towlines using only one winch. Within a few seconds from the time one glider is released from the winch, it is ready and waiting for a new glider. The trick is again to use a continuous loop which is driven through a friction pulley at the winch end. To this continuous loop, two "side" towlines are attached. The pulleys and guides at each end must be large enough to allow the drop parachutes to go through the guide and the shackles of the pulleys. And away you go. Almost as soon as a glider is released from number 1 line, number 2 line is ready to accept a glider.

One tricky part of making this work is to get enough friction to drive the loop. This can be done in two ways. One is to place about two or three turns of line on the drive pulley, as is done with ship capstans for pulling up the anchor. In this case, you must disconnect the side line while its attachment loop makes an extra circle around the drive pulley. Then reattach it on the other side of the drive pulley. A simple dog leash snap hook would work. If you don't like doing this, you could try a bicycle wheel for the friction drive. Line the rim with rubber sheet and you can get plenty of friction. The trick is to get a reasonably long length of the loop in friction contact with the drive wheel. With a bicycle wheel, there's no need to loop around the friction drive more than the normal half circle and then the parachute and side lines can remain attached and fed around the wheel.

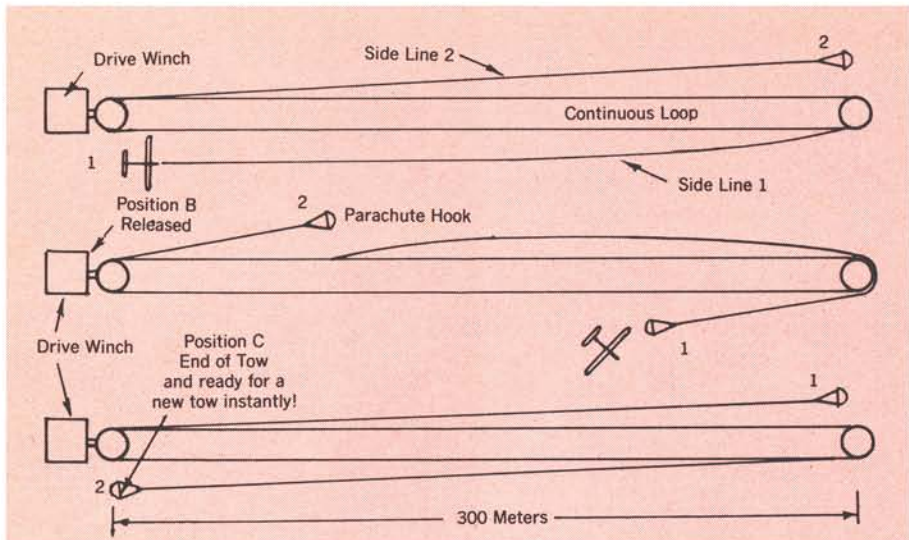
As more and more people build winches of this type, we will hear more and more cheers for Bob Denny from Contest Directors and competitors. I can envision where 100 gliders could be launched using only one winch. This would get rid of a lot of tangles—both of the towline and people type!



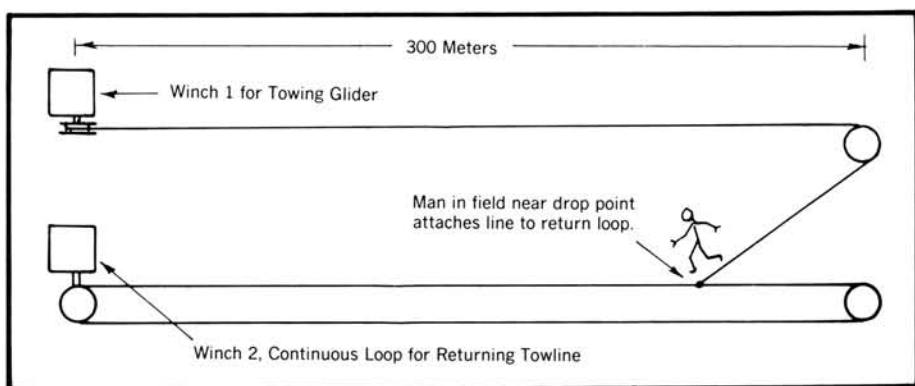
First pull a slack loop in the line as in Step 1. Next, flip it over the tow ring. This system lets you attach the ring at any point on return loop.



Towline now self-tightens itself upon the ring, signal starts the distant winch and the line is retrieved with a minimum of time and footwork.



A really clever idea for a Winch system by Bob Denny. It's ready to go the instant the previous glider is released. The above diagram represents one winch in three separate stages of a tow. (Not three winches.) All is described in text. Great for big R/C Soaring meets, clubs, etc.



Bob Denny of Silver Spring, Maryland came up with an easy retrieving system for Glider Towlines. The trick is a continuous loop on one winch. Let your fingers do the walking. See text.



The winner! Otto Heithecker accomplished an almost unbelievable performance at June 4 D.C.R.C. Soaring meet. Four max flights of 10 minutes were landed inside the spot within a total of seven seconds error. A total score of 2593 out of 2600! He used a Cirrus wing scaled up to 12 feet in span on a home design fuselage and tail. A capable aircraft. Photos by Bob Denny.

Don't be down... because others are up!



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