

Shooting Heads

by Mike McGuire

For a number of fishouts we have planned for the year, the ability to understand and use shooting heads is pretty much a requirement for success. In particular this applies to the surf and Pyramid Lake fishouts. In general they lead the way the way to fishing beyond relatively short range casting for trout in streams.

So what is a shooting head? In a way, any weight forward (WF) fly line is a shooting head system, but what we really mean here is a WF setup of relatively extreme or aggressive proportions. To compare: a conventional WF line has a front taper of 7 or 8 feet, about 30 feet of full diameter line, followed by 5 or so of back taper, with the rest of the line being relatively thin running line. See for example <http://www.rioproducts.com/product.php?recKey=49> This WF line should be nominally the line weight for which the rod casting it is rated. A shooting head system is typically 26 to 30 feet of fly line 2 line weights heavier than the rod rating followed by as much as 100 feet of very thin running line. The head and the running line are connected with loops so that various heads ranging from floating to intermediate to fast sinking can be swapped as fishing conditions require. The heads may or may not be tapered. Generally shooting head systems are used starting with 6 weight rods and going up.

A variant on shooting head systems are integral head systems where the head and running line are all of a piece like a conventional fly line but with the extreme proportions of a shooting head system. These were originated by [Jim Teeny](#), but now most manufacturers offer them. The advantage is that there is no loop junction of head and running lines to pass through the rod guides. The disadvantage is no possibility of changing the sink rate without changing the whole line, much more hassle than changing a head.

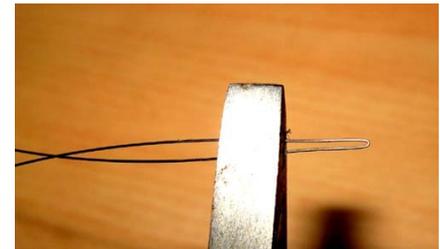
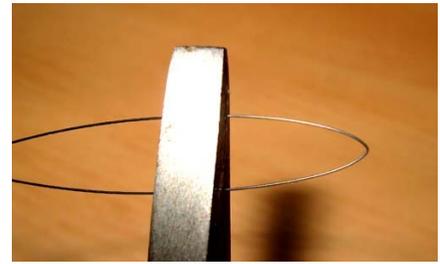
So how to get started? One way is to take your rod, reel, and credit card down to the fly shop and ask them to fix you up with it. If you prefer less ruinous more DIY approach here's what you will need, a second spool for your fly reel, some dacron backing line, 20 lb for 6 weight rods, 30 lb for heavier rods, a running line, some shooting head material and some 35 or 50 lb nylon braid for making connector loops.



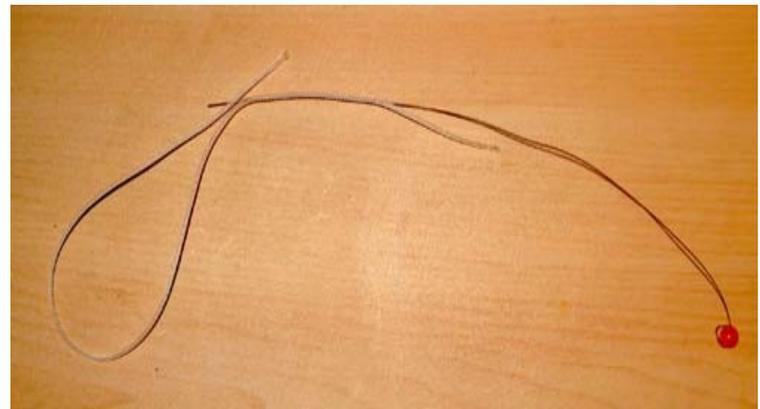
Making Braided Loops

First of all, how to make and put braided loops on the ends of a line. The preferred material is Gudebrod 50 lb butt leader, available in local fly shops. The type of loop is called a "double catch." It is described on [Dan Blanton's web site](#), but essentially repeated here for completeness in this article. To make a loop one needs a wire tool. I use 0.010"

music wire. Take about 12" of it and put the ends together even and secure them with a little tape. Next make an initial bend in the middle to as sharp a point as possible by squeezing it with your fingers. You should get something like the first picture. Grab it with one pair of pliers as shown and take a second pair of pliers and squeeze it to a fairly sharp point like the second picture. Using two pairs of pliers keeps it from twisting so you can get a good point.



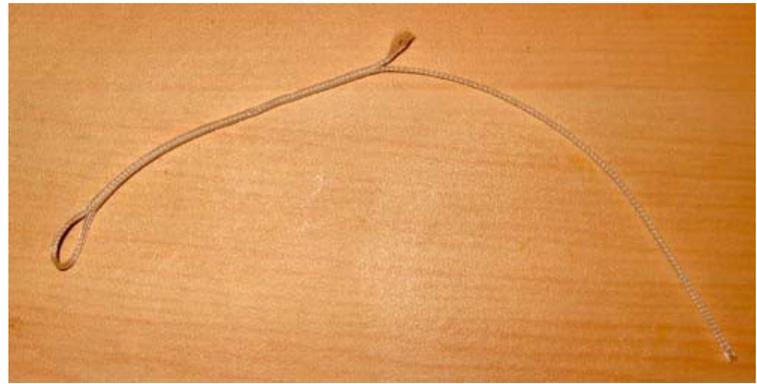
Next take a 12" piece of the braid. Insert the wire about 1.5" from the end in the direction of the other end and work it up about 1.5" and the out. Catch about a 1/4" of the other end in the loop of wire as shown here and draw it tight against the loop. Now jerk the wire, pulling the end in a then out where the wire went in. Adjust the loop to about 1/2" diameter. This is the first catch done.



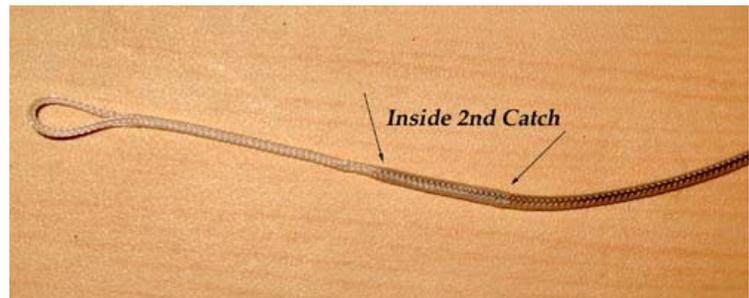
Next insert the wire again in the long part and out again where the first catch tag comes out. The insertion length should be 1/4" less the length of the tag. Now catch that tag with loop of wire as shown in the picture. Jerk the wire again to pull the tag through and out as shown here. It may be helpful to put something in the loop when you do this to keep it from being



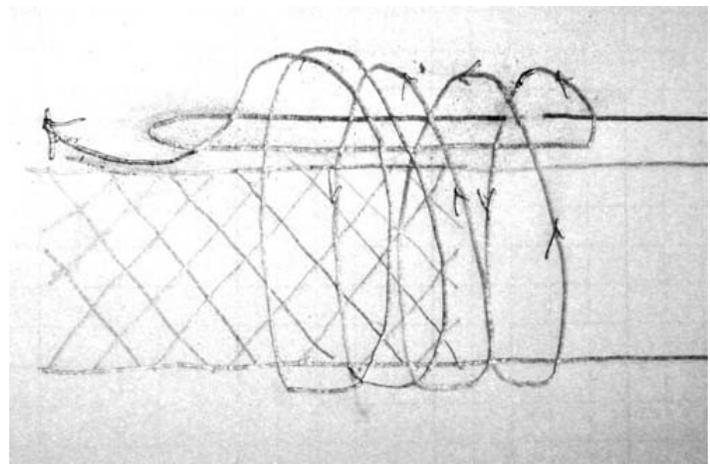
drawn inside itself. Now pull on the tag end to expose some of it that is inside, and cut it off nice and square so that where it's smoothed out, it's all inside. With this the second catch is done.



Now take a razor blade and cut the end of the fly line so that there is about a 30 degree sharp point on it. Push it into the end of loop and with an inch-worm/accordion movement work it up towards the end of the second catch. When you reach that end you should be able keep going with the sharp end of the line going up inside the second catch most of the way to the first catch as shown here.



All that's left now is to finish it off. There are two ways to do it. One way is to take some 10 or 12 lb monofilament and tie a nail not around the end for loop. The way I like to do it is to serve it down with some fly tying thread such as flat waxed nylon as sketched here. Whichever what you do it, coat the finish wrap with Pliobond glue, but just on the wrap. Don't glue the rest of the loop to the line. That would defeat the "Chinese Finger Trap" principle by which it works. Both ends of a shooting head get loops like these.



Now there are commercially made braided loops, but they are single catch and held together with glue. They don't last compared to double catch loops.



In some cases the heads come with welded loops on one or both ends. These work fine and don't need to be replaced with braided loops.

Types of Shooting Heads

Shooting heads come in range of sink rates from floating to sinking faster than car keys dropped overboard. If you look at a manufacturer's range of heads, for a given rod weight, say [Rio](#), you will find a floating line, an intermediate line, and a series of sinking lines which sink at progressively faster rates, usually denoted as type 1, 2, 3, ... These typically come with welded loops on both ends. In addition Rio offers the T-series of lines, T8, T11, T14, which are sold by the foot at fly shops. These are weighted with tungsten, and are respectively 8, 11, and 14 grains per foot. These will need loops put on their ends. Cortland offers a lead core line called LC13, 13 grains per foot. Metal weight lines like these are the fastest sinking.

Matching the Head to the Rod

Line weights are specified in terms of the weight in grains of the first 30 feet of a line

| <u>Fly line</u> | <u>Weight in grains</u> |
|-----------------|-------------------------|
| 1-Weight | 60 |
| 2-Weight | 80 |
| 3-Weight | 100 |
| 4-Weight | 120 |
| 5-Weight | 140 |
| 6-Weight | 160 |
| 7-Weight | 185 |
| 8-Weight | 210 |
| 9-Weight | 240 |
| 10-Weight | 280 |
| 11-Weight | 330 |
| 12-Weight | 380 |
| 13-Weight | 450 |
| 14-Weight | 500 |
| 15-Weight | 550 |

As mentioned above, weight of a shooting head should be about two line weights greater than the label on the rod. This leads to an ambiguity when you go to buy one. Is that head labeled 8 weight 210 grains, the same as a regular 8 weight line, or is it 280 grains, which would be right for an 8 weight shooting head? It's resolved by asking what the weight in grains actually is. This is often but not always specified on the package. You could also weigh it. There are 15.4 grains per gram. Thirty feet of T8, T11, and T14 will be respectively 240 grains, 330 grains, and 420 grains. Rods and casters vary and it's not unusual go somewhat

heavier on the grain weight, and somewhat shorter or longer than 30 feet for the head.

Bargains in Heads

The first 30 feet of a WF line two weights up from your rod is a floating head for you. These often appear at shows like ISE and the Fly Fishing Show. There is also [Sierra Trading Post](#) which carries outlet fly tackle. The T-Series lines run about \$15 for 30 feet, half the price or less than other heads.

Running Lines

There are a number of choices here. Cheapest and simplest is monofilament. The common brand is Amnesia which claims to be memory free. When you work it right, you'll get the longest casts with it, but when you don't, you'll have a lot of frustration with tangles, which it does enthusiastically. Hence it's also called "Damnesia." It's said that soaking it in fresh water for a few hours before using it improves its behavior quite a bit. It deteriorates fairly quickly and need to be changed after a few outings. To connect to the head, a clinch knot or better yet a [Eugene bend](#) to the loop on the end will suffice. To change heads, just cut the knot. It's expendable. There are some fancier coated monofilaments like Rio Slick Shooter which is somewhat better behaved. Finally there is regular running line which is essentially level fly line which range in diameter from 0.024" to 0.035". The thinner stuff casts further, the thicker stuff handles better and tangles less. These lines get a braided loop put on the ends, but the loop instead of being only ½ " in size should be about big enough to put your hand through. That way you can put a coiled up head through the loop when making a loop-to-loop connection. The length of the running line, whatever the type should be 80 to 100 feet.

Backing

The main thing I advise here is to tie a bimini hitch in the end of it and use the doubled strand of the bimini to tie the arbor knot to the reel spool. That way the strength of the backing is not compromised. A bimini at the other end for loop-to-loop connection to the running line is advisable for the same reason.

Casting

The first time you try casting a heavy head, especially the sinking variety like the T-Series, it will feel like you have a dead armadillo tied by the tail to your rod. It's different from casting floating lines. To cast, first you have get a sunken line to the surface. This is done by stripping in all the running line and some of the head. At this point if you have in enough of the head, you will be able to roll cast the rest of it to the surface in one stroke. If not take in more head and keep on roll casting until you can. Then do a back cast and do a forward cast shooting

just enough line to get the head maybe a foot or so out of the tip of the rod and lay it down onto the water. As soon as it touches the water back cast again—don't let it sink. The sticking of the line to water loads the rod for the back cast. This is know as a “water haul.” If the head didn't get far enough out or didn't lay out straight, do a back cast-water haul again. This combination of back cast-water haul is what you do instead of false casting. When all is right, from the back cast do a vigorously hauled forward cast and shoot to get the long cast. When surf fishing, the state of the waves may not be right for a cast at a particular moment, so one or two back cast-water hauls will keep the line ready to cast at the right moment. This all really needs to be practiced on water. Lawn casting won't get it right.