HANGING A CANOE SLALOM COURSE

A do it yourself 5 minute guide

Guto Merkle, April / 2008

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This manual is available in: English, Español, Português

The following pages will help you set up a training course for canoe slalom.

A course that is cheap, fast to set up, and possible to transport inside the boat.

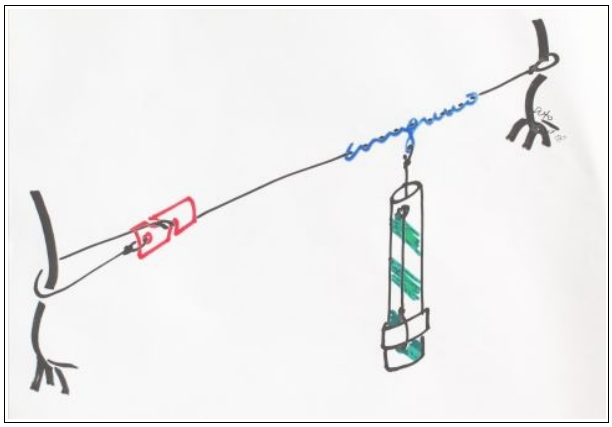
One that is good for training or informal races, in rivers up to class II.

The poles can be moved and adjusted from the boat and also from the shore.

Look the pictures and read the instructions:

Tools needed

- A knife or penknife.
- A saw for plastic.
- A pen.



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MATERIALS

Plastic pipes for the poles

Measurements: 5 feet length, 3/4 inch diameter. (1,5m x 20mm)

The gray one in the picture is made of PVC.

The red one is made of polypropylene. This one floats.

Any similar lightweight pipe will do.

The color doesn't matter if it will not be used for races, but a good idea is to paint them in different colors: green, yellow, blue, white, and so on. This makes it easier to explain the course during the training sections. Using colored adhesive tape seems like a good idea to color the poles but it will make it more difficult to adjust the height of the poles further.

After cutting the poles to a 5 ft (1,5m) length (this length fits inside the kayak for transportation), make a 1/8 inch (5mm) hole near one of the ends.

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Nylon lines ~ 1/32 to 3/64 inch (0,8 - 1mm) wide

These will be used to hang the poles above the river, passed from one shore to another at approximately 6 to 10 feet (2 to 3m) above the water.

Use colored lines because they're easier to see.

Keep the lines rolled around plastic bottles. It will be easier to work with them that way.

Reserve about 7 feet per pole, (2m) beyond the width of the river for the height adjusting system.

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Wire snaps (small carabiners)

These are made of stainless steel and generally used by fishermen. The ones shown in the pictures are about 1 ½ inch long (35mm). They are not indispensable but they do make the job easier and save time.

If you don't have any snaps, you will just have to tie and untie a greater number of knots.

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Nylon cable ties

These are used for the system that will adjust the pole's height off the water

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Wire with which to make a "spiral”

By attaching these wire spirals to the lines going across the river and then attaching the poles to the spirals, the friction of the spiral against the line will maintains the pole in place. Neither the wind, nor a heavy touch can move it. If one shore is higher than the other and the line has a lot of slope, the pole will not move, either.

On the other hand, it is easy to slide the pole from side to side either from the shore or from the boat.

This spiral is made by twisting an electric wire around a pen, as shown in the picture. Not all the wires will work the same way. Some are too squeeze. In this case, twist it more times or bend it with your hands after it is in the line, until you find the right resistance.

Remember to bend the ends of the spiral back, when putting it on the line, so the snap will not release from it, when you pull the pole (see pic. 13).

Since we don't use cross bars on these gates, if it is necessary to number the gate, say for a race, the number board should also be fixed to this spiral.

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Line stretchers to adjust pole height by raising or lowering the line

The sequence of pictures 16 to 24 show how to make them from a piece of plastic pipe. Picture 25 shows one made with the original line's reel.

By raising or lowering the nylon line from which the pole hangs it is possible to adjust the pole's height. The idea is to use this piece of plastic that will act the same way as the lines in camping tents.

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Adjusting pole height from the boat

Here is another way to regulate pole height. A line coming from the snap (which is attached to the spiral on the nylon line), passes through a hole near one end of the pole and ends at the cable tie placed around it. By moving the cable tie up and down it is possible to adjust the pole height. The system stays in place by simple friction. (Make sure to clip off the end of the cable tie so it doesn't protrude and cause you to hit the pole!)

(Pictures 10 and 13.)

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Adjusting the position from the shore (pic. 1 and 26)

Depending on local conditions it may be possible to use a "clothes line" system for hanging the gates. That is, you make the line crossing the river long enough that it can cross twice, and tie the ends together, making a sort of a "circle". Then hang a pole from one of the lines. And by pulling on one or the other of the lines, you can either pull the gate across the river towards you or send it to the other side.

At the finish, the line is stretched with the help of the same piece of plastic that is used in the normal system but used differently, as shown in picture 26.

Note that even with the "clothes line" system, it is still possible to move the pole from the boat the same way as before.

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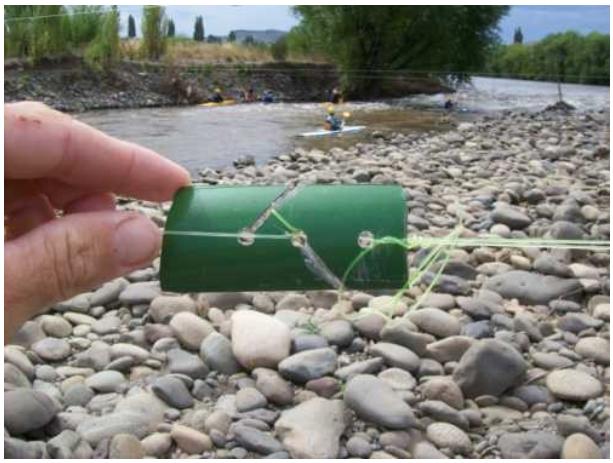

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How much does it cost?

We have calculated the price of the materials for a 12 pole course on a river approximately 70 to 100 feet wide (20 - 30mm). The prices are what were in Brazil in the beginning of 2008.

60 feet (18m) of PVC pipes	U$ 12
1000 ft (300m) nylon line (0.8 mm)	U$ 12
24 snaps	U$ 5
20 cable ties	U$ 2
16 ft (5m) isolated copper wire	U$ 1
Total	**U$ 32**

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HANGING AND REMOVING THE COURSE.

You need to take certain precautions before putting the nylon lines across the river. We are talking about class II water, but just in case...

There should no people running down the rapid during the job, lest they get caught in the line before it is raised to its proper height.

In general, hanging the course is done by at least two people: one feeds the line out to a partner who takes it across to the other shore, gets out of his boat and ties the line to a tree or something like that.

In taking the line across the river, tying it to the stern end loop of the boat is better than trying to hold it in your hand.

Furthermore, it is important that the person feeding out the line keeps it from touching the water as much as possible during the crossing, because there is less probability of it tangling anywhere. So he needs to hold it high above his head and not let it out too fast.

If the water is fast and there is not a good place to get out on the other shore, there needs to be a third person there, waiting to receive the line.

Another option (by the way, a safer one) is if the

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river is narrow enough, just attach a small rock to the line and throw it across the river, thus avoiding the need to use a boat at all. You can also use a throw line (rescue bag) instead of the rock.

Always have a knife at hand in case a line has to be cut quickly for safety reasons.

Don't try to hang a whole course with one long line, passing it back and forth across the river multiple times tying it off only after the last cross. While it may be tempting to try this on a narrow stream, if the line breaks at any place, the whole course will fall into the river.

Tie the line high up, but at a height that is still practical - about 7 to 10 feet (2 to 3m) from the water line. In the beginning the line may be a little loose and when you hang the poles on it they might even touch the water. But then you can pull the line tighter and raise the poles.

Where to tie the line if there are no trees on the shore?

Make a bipod or big"X" with two branches as shown in pictures 27 and 28. The line passes through the X and then is tied to something on the ground, such as a stick under some rocks, a root, a big rock....

Picture 29 shows a cable on the ground, which runs parallel to the river, put in place for this purpose (If you use this method, remember to put markers on the cable so people will see it and not trip over it).

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Clinch Knot

The clinch knot is the best knot to use with nylon lines - the ordinary square knot doesn't work well. The clinch knot is the same knot any fishermen uses to tie a hook to his line. Use it to tie the snaps, the stretchers, the cable ties to the line. See pictures 30 to 33 to learn how to make it.

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After a training session

When removing the line, ALWAYS roll it around a plastic bottle (easily found at any river shore that is the least bit civilized). Ignore this procedure and you will loose hours untangling a mass of knots while your partners change clothes and drink hot chocolate.

If the course will stay in place for several days, be sure that the whole system is well attached. For example, a low line near the water is dangerous for anyone who comes paddling down the river.

Do not leave the course in place if several days will pass without taking care of it.

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Thanks to

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To all the friends who helped hang gates during the summer of 2008.

To Bill Endicott who kindly helped with the revision of this English version.

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Feedback

Did this system work for you? Can you suggest better materials? Other ideas? Pictures? Share your solutions.

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And here's more!!

Totally free, how to make trekking shoes from your "havaiana".

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