

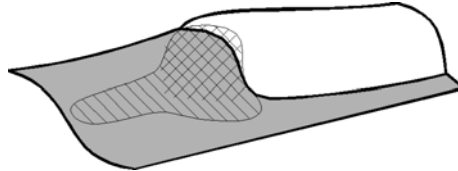
Kayak Surfing Manoeuvres

Surfers have been taking to the waves in a variety of craft for centuries. The beginnings of board surfing are commonly known to have started in Hawaii. The beginnings of kayak surfing are shrouded in mystery.

Whilst Indians and Eskimos are typically cited as the forerunners of canoeing and kayaking, it was the Polynesians that were first recorded to be surfing their war canoes in Captain Cook's log.

Kayak Surfing as we now know it started to take shape with the advent of fibre glass canoes in the late 60s, and has continued to progress alongside improvements in design and manufacture.

Shaded area shows where sufficient energy is available for surfing. Cross hatched area is where maximum energy is available – the power pocket



When out in the surf, a surfer will be looking to perform the most radical and functional ride in the most critical section of the wave.

The ride can be broken down into three sections; getting started or the take-off, the finish - end manoeuvre, and the bit in between - the ride. Other important aspects of surfing are the paddle out and the inevitable wipe-outs. Lets now take a look at these in turn.



Wipe Outs

When everything goes horribly wrong, and you lose control of your craft you will wipe out. Depending on the size and nature of the wave this can be very spectacular, even painful, and may well involve lots of unintentional capsizes and cartwheels. If you don't bail out of your boat, you'll find your self being pushed sideways and bounced in towards the beach. This motion is known as the bongo slide, and mastering this skill is the first step

towards feeling truly comfortable in the surf.

To practise the bongo slide, paddle out to where there are broken waves coming in at regular intervals and turn your craft so that it is sideways-on to the waves. As the water hits you, edge your craft into the wave and apply a low brace. The wave will push you sideways and bounce you towards the beach in the classic bongo slide position. If you lean forwards and apply the low brace in front of your hips the craft will tend to track in the direction in which the stern is pointing. If you lean back and apply the brace behind your hips, the craft will track in the direction in which the bow is pointing. So by varying your body position, you can control the angle of the craft as it slides ashore. Remember, as with all paddling techniques, to practise on both sides. Once you feel confident at handling your craft in the broken water you can go out beyond the break line to the green waves.

The Paddle Out

Paddling out through the surf can be quite intimidating for the beginner. Many get out beyond the break line and are then reluctant to paddle back in again! With a little patience and skill, the art of paddling out will come very quickly. The most important thing to avoid is being hit in the upper body by the full force of a broken wave.

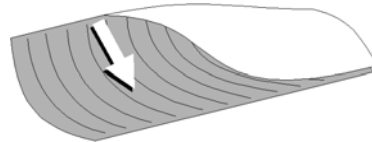
Paddle into oncoming waves at a slight angle rather than at right angles. As the wave approaches the bow lean back and down wave slightly, keeping the paddle high to avoid being hit in the face by the shaft and pull the craft through the wave. As you approach the break line, pace yourself so that you can either hold back and let the wave break, or put on a quick sprint to get over the top of it. Once you get beyond the break, paddle a little further out to get your breath back and to avoid being caught by any large sets which might come through.

The Take-Off

Swells race towards the coast at incredible speeds, slowing down and increasing in size as they approach shallow water. Finally, when a swell passes over the ocean floor at a depth approximately 1.5 times its own height it will begin to break, expending much of its potential energy in the process. It is just before this point that the surfer, using self propulsion, can acquire the wave, or take-off. The take-off is therefore the entry point to a wave.

Straight Take Off

The easiest of the take-offs to perform. The paddler aligns angles to the approaching wave. As the wave comes up sprint forward to gain sufficient momentum to slide down the steeper the wave at the moment of take off, the easier perform.

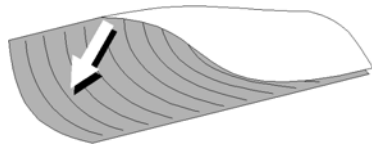


them self at right behind them they face of the wave. the take-off is to

Once on the wave the surfer now starts to perform the manoeuvres that will constitute the ride.

If the paddler continues to run at right angles to the wave, the paddler will get a short ride as the wave will now break, and may force the paddler to perform an end manoeuvre.

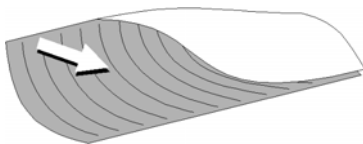
Angled Take-Off



Similar to the straight take-off, only this time the surfer is not at right angles to the approaching wave, but is instead angled to run down the face of the wave away from the shoulder.

This take off allows the surfer to move straight into a diagonal run.

Faded Take-Off



The last variation of the straight take-off is the faded take-off. This time the surfer angles the take-off, so as to move into the critical part of the wave. Enabling the surfer to correct poor initial positioning on the wave for the take off and to gain the power pocket. Once into the power pocket the surfer will need to perform a manoeuvre to turn away from the approaching shoulder.

Paddle Out Take-Off



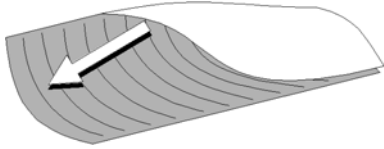
The paddle out take-off allows the surfer to catch a wave at the most critical moment possible while paddling towards the break. This manoeuvre requires that the surfer is able to propel their craft at a reasonable speed whilst paddling out and as such is only performed by wave skis and kayaks.

The Ride

The technique of riding an unbroken wave by travelling along its length as well as running shore wards is fundamental to surfing in any craft. It is called a diagonal run.

Diagonal Run

Get the kayak surfing and then turn away from the break and tilt the craft with your hips into the wave to allow the edge (or rail), to grip the water. Twist the upper body towards the beach and apply a low-brace rudder on the down-wave (beach) side, prising the stern into the wave to keep the nose down and pointing along the wave. With any luck you will be positioned on the wave in the power pocket with the broken wall of water (the shoulder) chasing behind you.



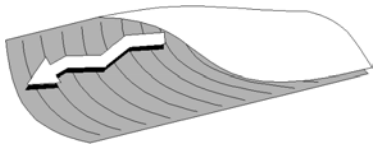
Once performing a diagonal run, you can alter the angle of the kayak to face down wave lean the kayak up wave and release pressure from the low-brace rudder.

To alter the angle of the kayak to face up wave lean the kayak up wave and release pressure from the low-brace rudder.

This technique forms the basics for all surfing manoeuvres. To achieve the more complex manoeuvres the low brace rudder may be applied on the up wave side and the kayak may need to be leaned to some seemingly impossible angles.

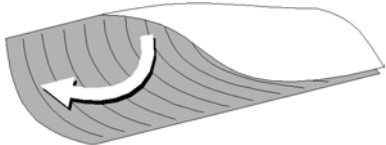
Trimming

As mentioned above the diagonal run is the basic surfing position from which all manoeuvres can be performed. From this position the surfer planing along unbroken sections of a wave can trim the kayak up or down the wave to maintain or increase speed, which is essential in all manoeuvres. Thus a good diagonal run using trimming, will not be a dead straight one.



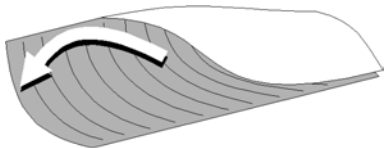
Bottom Turn

Upon reaching the base of a wave the bottom turn produces the direction change and acceleration necessary to climb to the wave's crest. This manoeuvre will be performed immediately after a straight take-off, enabling the surfer to climb back up the wave into a position to perform a diagonal run. It can also be used to negotiate a fast or breaking section, allowing the surfer to surf down and around the white water and regain the shoulder beyond.



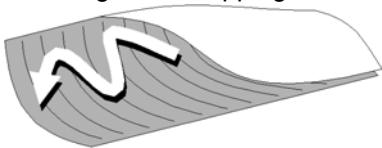
Top Turn

The top turn is used to change direction after climbing to the uppermost section of a wave. When at the top of the wave the surfer is in danger of stalling and sliding off the back of the wave. To avoid this the surfer needs to lean forward to ensure that the kayak completes the manoeuvre. The top turn can also be used as a stall technique for regaining the power pocket.



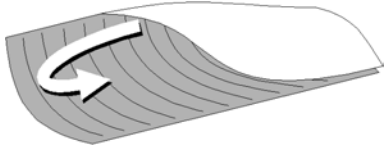
Climbing and Dropping

Climbing and dropping is the sequence of combining top and bottom turns. With each sequence the surfer increases speed to facilitate further manoeuvres.



The Cut Back

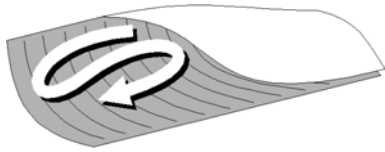
The cut back allows the surfer to change the direction of the diagonal run through 180 degrees. This is done by turning the kayak down the wave and continuing the turn until the kayak is facing the direction from where it came.



The cut back is performed upon reaching a slower section of a wave whereby the surfer changes his direction 180 degrees back towards the pursuing white water thereby regaining the pocket.

Roundhouse Cut Back

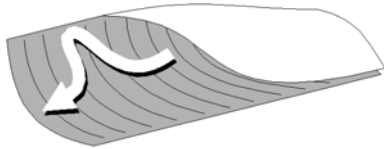
In the description above the cut back was performed by the surfer travelling away from the shoulder. It can also be performed when planing towards the shoulder, so as to return to the position of the diagonal run.



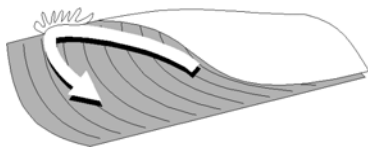
When two cut back turns are performed in succession, the first towards the shoulder and the second away from the shoulder, this manoeuvre is known as a roundhouse cut back.

Tail Slash

This modification of the top turn is performed as the surfer travels steeply up the face of the wave, where upon the surfer performs a flamboyant turn through almost 180° where the tail of the kayak will slash across the top of the wave.

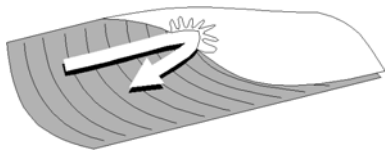


Lip Turn



This top turn is performed right on the lip (crest) of the wave, using the power of wave to turn the kayak.

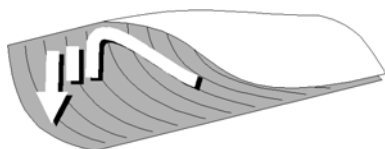
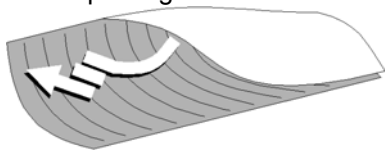
Bouncer



When running towards the shoulder, following a cut back or faded take off, the surfer can continue the run right into the broken section of the wave, using the force of the white water to turn the kayak and bounce back into the power pocket.

Side Slide

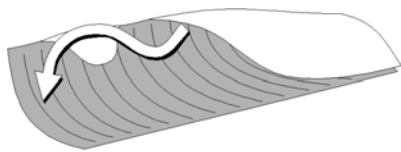
Whilst planing a fast section of an unbroken wave the surfer can perform either a bottom or top turn and then releasing the forward rail causing the kayak to slide sideways in the original direction of the run. The side slide can be used as a means of stalling, thus allowing the shoulder to catch up.



The side slide can also be used as a means of dropping to the bottom of a wave. The boat control and technique required for a side slide is similar to that required by a floater.

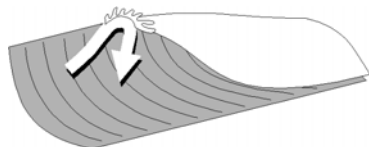
Floater (Roller-Coasters)

On occasions when racing along a wall, a section of white water will break in front of you. This necessitates turning in a long arc around the base of the white water (a big bottom turn), or alternatively, climbing up and floating over the top of the foam before roller-coasting back down on to the unbroken water.



Re-Entry

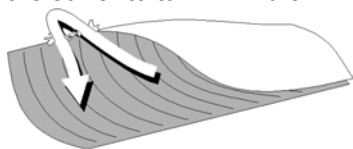
Having ascended to the crest of a breaking wave it is possible to re-enter, turning back toward the base of the wave, using the crumbling/pitching lip as a power source to aid redirection: yet another functional method of keeping near the power pocket.



The re-entry can be used as a close-out manoeuvre when performed on an approaching shoulder. Enabling the surfer to travel to the base of the wave away from the crashing white water as the last portion of the wave breaks.

Aerial

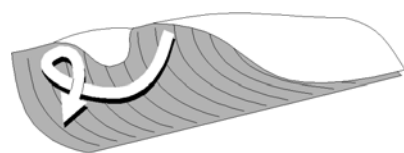
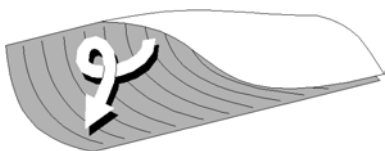
In the right conditions it is possible to extend a re-entry to the point of leaving contact with the wave crest, allowing the surfer to turn in mid-air.



Like the re-entry the aerial can also be used as a close-out manoeuvre by the surfer using the power of the approaching shoulder to aid redirection to the base of the wave.

360°

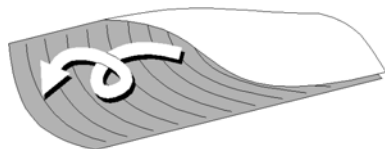
In a kayak the 360° is performed as a flat spin. It is initiated by forcing the tail of the kayak to slide down the wave and around so as to cause the kayak to be planing backwards. Once this point is achieved the paddler then repeats the process, by forcing the nose of the kayak to slide down the wave and around, returning the kayak to a forward planing direction.



This manoeuvre may be deemed dangerous both for the kayaker and other water users, but it can be a flamboyant functional manoeuvre. A typical application of the 360° is as a stalling manoeuvre performed on the face of the wave whilst waiting for the shoulder, as an alternative to the cutback .

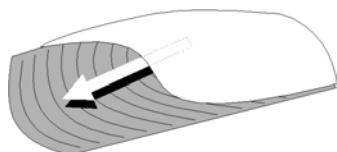
Other applications of the 360° are as part of a top turn, part of floater or as a regain 360°.

Reverse 360°



The 360° is initiated by sliding the tail of the kayak down the wave. With the reverse 360° the turn is initiated with the nose of the kayak turning down the wave. An altogether harder manoeuvre.

Tube Riding



There are occasions, when riding steep-walled waves where the rider is confronted with a section that is impossible to negotiate, other than to trim underneath the throwing lip, and ride the very inside of the wave. Tube riding is sometimes referred to as getting covered.

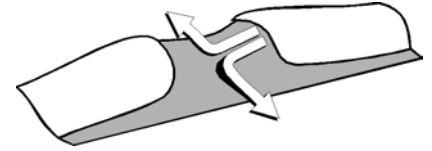
End Manoeuvre

When the wave finally closes out and there is no more unbroken wave to plane along the surfer needs to finish the ride by performing an end manoeuvre. At times it may even be necessary to finish the ride prematurely, due to the particular circumstances at the time (obstacles such as rocks, piers or other water users).

The simplest way to pull off a wave, is to turn up wave and climb up and over the back before the whole thing collapses and becomes a heaving mass of soup.

On occasion it is not possible to exit over the top of the wave, forcing the rider to either straighten out and ride the white water, or punch through the wave - the punch out.

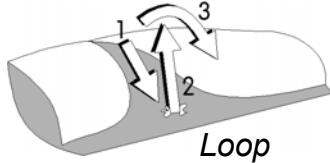
The alternative to pulling off the back of the wave is to straighten up and use the white water to perform an end manoeuvre unique to kayaks. The easiest of these manoeuvres are the loop and pop-out.



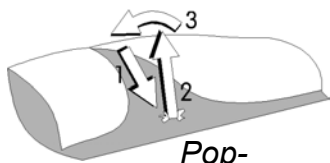
Loop and Pop-Out

By continuing to lean forwards as the breaking wave lifts the back of the boat, the nose will dig in. As the wave continues forwards the tail will rise and as the wave passes the now vertical kayak the volume in the bow that is displaced under water will cause the kayak to shoot upwards. It is possible for the nose of the kayak to clear the water, when this happens it is called a sky rocket.

If the tail of the boat in the vertical plane, capsized position, If however, the tail nose of the kayak, but position a pop-out has



Loop



Pop-

It is possible through end manoeuvres. By are more likely to whilst vertical you are By the use of body can be spun on its vertical axis, thus enabling the pirouettes.



travels over the nose of the boat causing the paddler to land in a then a loop has been performed. doesn't pass vertically over the instead returns to its original been performed.

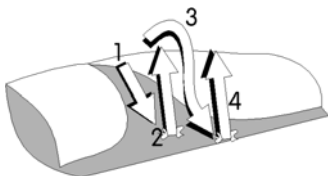
body positioning to control these leaning the body forwards you perform a loop. If you lean back more likely to perform a pop-out. rotation, when vertical, the kayak performance of dry loops and

Pirouette

Having forced the kayak into a vertical position, the kayak can be spun on its vertical axis. A 180° degree spin as part of a loop is termed a dry loop. A 360° degree spin or even a 720° degree spin is known as a pirouette.



Cart Wheel



The cart wheel is performed as a means of a forward and then reverse loop on the same wave. The trick with the cart wheel is to land the kayak after the first forward dry loop in front of the wave in a position where a reverse loop can then be performed.

Conclusion

Near perfect conditions are necessary for the efficient and repeated performance of many of these techniques but all are possible at some time. Neither is this a definitive list of all possible surfing manoeuvres. In the fullness of time as the sport progresses, new manoeuvres will be invented.

All require maximum concentration and exploitation of the wave's power pocket together with sufficient nerve, power and skill from the surfer.

It goes without saying that the ability to roll 100%, with speed and confidence is paramount. Allied with the necessary physical conditioning to withstand the punishment of repeated fights out beyond the break of heavy rollers. Multiple applications are often possible on the right waves but nothing should detract from the basic skill of just staying on, exploiting and riding the wave as close to the shoulder and for as long as possible.