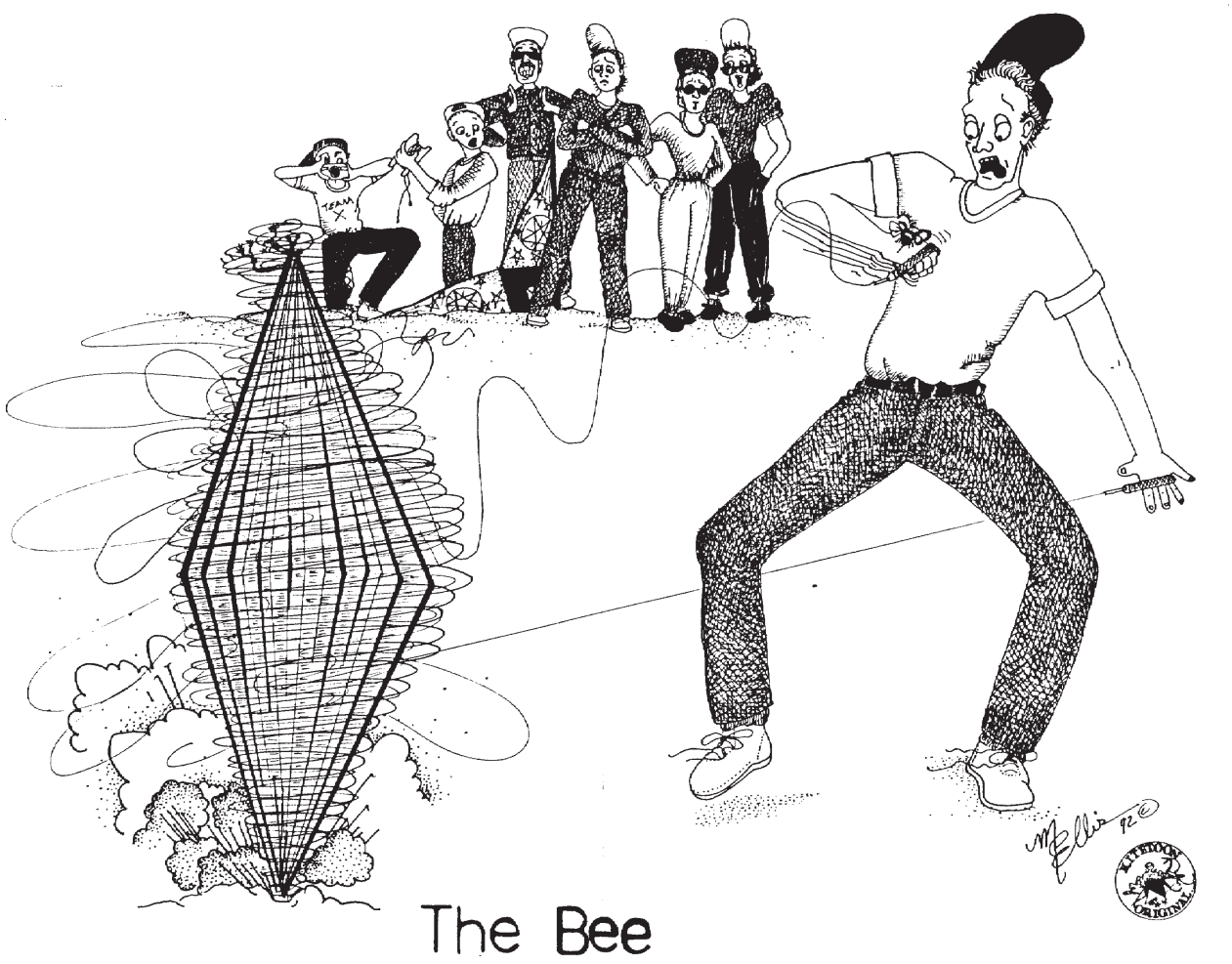


Chapter 8: Magical Illusions and Hot Tricks

It isn't hard to imagine where some of these "hot" tricks and techniques came from.

> A flier jerks on the line to try and relaunch a downed kite. The kite rolls over twice and unexpectedly pops into the air.
>
> A flier accidentally sets their tow point wrong and notices the kite hovers longer.
>
> A flier pushes when they meant to pull and sees the kite flat-spin around.

And then all those fliers and their friends spend weeks trying to analyze and recreate those "accidents" so they can do them again.

Tricks and stunts evolve daily. This means that the flying field is the best place to learn the newest ones. Go to events. You can ask questions, compare ideas, and watch hands and kite movements over and over. In return for learning a new move, you can share what you already know.

Another option is to purchase specialty video tapes. Books are a good source of information, but for some moves, video provides a clearer picture.

If you have been practicing your homework assignments from Chapter 1, you should already have several good tricks in your "repertoire". Sustained stalls, wingtip stands, the leading edge launch, and axles are by no means easy moves. Some of the tricks in this chapter will be easier. Others will be more difficult.

Notice that many of these maneuvers are related to one another. You can start with one basic technique - like a leading edge launch or an axle - and then build derivatives of that move. Adding refinements is how old maneuvers evolve into newer ones.

The point is to build a collection of tricks that will work in a variety of circumstances and wind conditions or transition easily from one to another.

Light Wind Moves

There was a time when fliers cursed light wind days. But ultralight equipment and more efficient designs have left those days long behind.

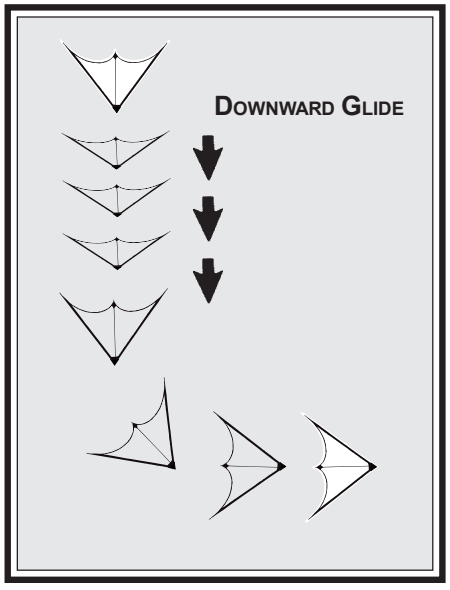
Fliers now find opportunities in "marginal" winds that allow breathtaking and seemingly impossible moves.

Downward Glide or "Fly Away": In lighter winds, you often need to move back to sustain flight, fly a constant speed, or produce enough power to complete maneuvers. But whether you are on an open field or a marked competition arena, there is a limit to how far you can back-up.

The Glide is one way to recover ground. It lets you gracefully move forward and also provides a good transition to other light wind moves.

Start high in the window. Turn gently into a vertical dive, but instead of tensioning your flying lines and moving back to generate speed, ease tension on the lines and move forward.

If you get it right, the kite will nose away from you and start gliding horizontally downwind. In this position, the kite actually glides faster than the wind is moving. Stay alert and make sure you maintain control.

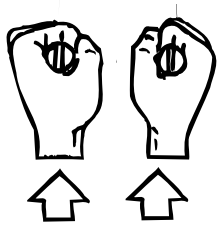


If you move too slowly, the kite will nose toward the ground and dive more quickly. You won't recover as much ground, and might even crash.

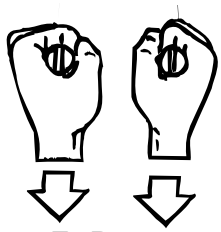
If you move too fast, the kite will flip over on it's back into a stall that is quite difficult to recover from.

Keep just the right tension on the lines and be prepared to run downwind with the kite.

To recover, pull-back on your lines and return to a dive. Make sure you have enough room to turn out before you reach the ground.



To Glide Forward, Reduce Tension on Both Lines



To Recover Increase Tension on Both Lines

There are also more dramatic ways to conclude a long fly away glide. You could spin and land. You could plant the nose gently into the ground, and then relaunch. Or you could turn into a 360 as we explain on the next page.

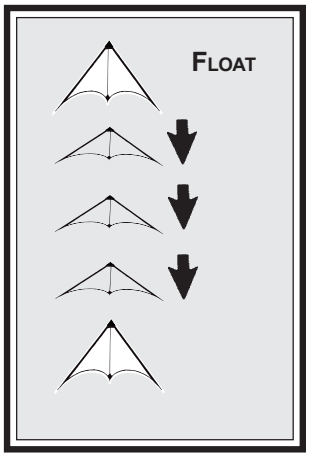
Be creative. If the kite is flying nearly flat and horizontal to the ground, try popping one line in an "axel-like" move to spin it around, nose up.

Float: The Float is similar to the Glide except that instead of flying nose-first, it settles back toward the ground, trailing-edge first.

You can begin a float from almost any point in the window as long as the kite's nose is pointing straight up and the trailing edge is parallel to the ground. Simply move forward and reduce line tension until you stop climbing and actually begin to fall in "reverse".

In this case, if you move too slowly, the kite will stop floating and start to climb again.

If you move too fast, the kite will flip over on it's back and stall.



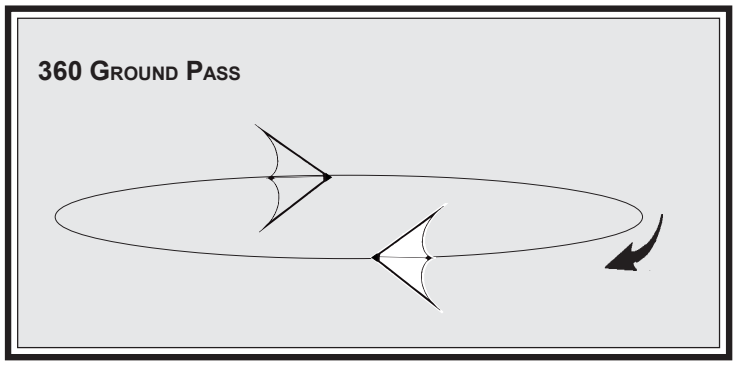
Keep your line tension balanced so the trailing edge remains parallel to the ground. If one wing starts to drop more than the other, increase line tension on that side. Like in the Stall, you are relying on disturbed air flow around your wings to reduce lift. Usually, moving forward smoothly will be enough.

You have already used a Float as part of the sequence in a Three-Point Landing. Try doing a longer one from higher in the air.

Light winds provide a great opportunity to see how well your kite will fly in a direction other than where the nose is pointing. Experiment with transitions. Try an Axle, Float, and another Axle. Or Float to a landing, relaunch to a low altitude, Axle, then Float to another landing. You can try all kinds of moves that involve floating backwards, upside down, or even sideways.

360 Ground Pass: In the Glide and the Float you move forward to reduce line tension and slow the kite's flight. In the 360 and the Up and Over, you do the opposite. You move back to increase speed. The trick is to find somewhere to go.

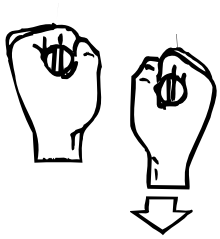
A 360 is a low ground pass that completely encircles the flier.



Start at the outside right edge of the window, flying back toward center in a horizontal pass about ten feet off the ground. Begin to back up as you pass center in order to generate any extra power that the light breezes may offer. The kite should reach maximum speed as you approach the left side of the window.

Keep backing up to maintain power. As the kite passes the left edge, you should be backing toward the right side. This will keep the kite moving forward. As it continues to arc upwind, you should begin moving downwind. Keep backing perpendicularly away from the kite.

You will eventually move in a full circle and the kite will follow you on around. The key is to be walking downfield faster than the wind is blowing. This will keep the kite moving upwind. As the kite passes directly upwind, you may find yourself running.



Like in Any Horizontal Pass, Pull Back Slightly on the Upper Line

Since you are flying from right to left, maintain slightly more tension on the right flying line. Keep the nose of the kite aimed slightly up. This will help maintain momentum and keep you from crashing if your pace slows. Practice flying straight and level in a true horizontal pass, rather than a jerky, uneven line. Of course, the object is to get all the way around - with or without jerks. You can work on perfecting the move later.

As your kite approaches the starting point at the right side of the window, it should start to fly on its own and you can slow down. Or if you like, you can build up some thrust and continue on around again.

Before you start a full field maneuver like this, make sure the entire flying area is clear. Don't just watch the kite as you pull it around, look back every few feet to see where you - and the kite - are going.

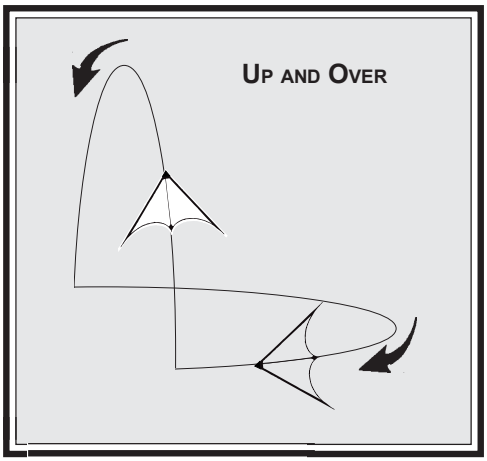
Upwind maneuvers like the 360 or the Up and Over depend on you moving smoothly back against the kite to generate "wind".

Remember the effect of line length on the size of wind window. If you are flying on shorter lines, the distance your kite needs to travel to complete a full circle is much smaller. And this means that you don't need to walk - or run - as far either.

Try using less than fifty feet and see how much easier the maneuver becomes.

Up and Over: This maneuver might have been called the 180 Vertical Climb and Dive.

A straight climb usually ends when the kite reaches the top edge of the window and runs out of wind. For the Up and Over, you extend the window by moving back and generating “artificial wind”. This, of course, means you have to move faster then the wind is blowing.

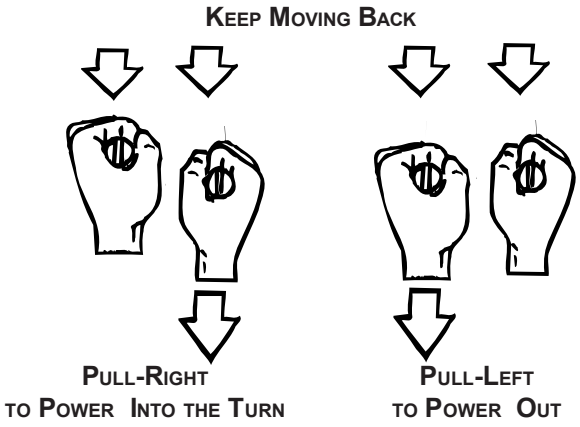


Some fliers like to start downwind, fly to the top of the window, and then run downfield to power over the top. This brings the kite down in a dive on the upwind side of the field where you turn the kite into a 360 and continue running until it returns downwind.

We prefer to start in a 360, using the extra push gained by flying across the window, and fly a horizontal pass to the upwind side of the field. Then power the kite into a climb by running downwind. Even though this is an angle turn, use a pull-pull to add power.

When the kite reaches the top, the wind will be working with you to finish the maneuver. Fly straight down, or shift to a downwind Glide to recover some of that field you have run off.

The Up and Over is impressive, whether you start the vertical turn upwind or down. Try both approaches on very light wind days and see which makes you work harder.



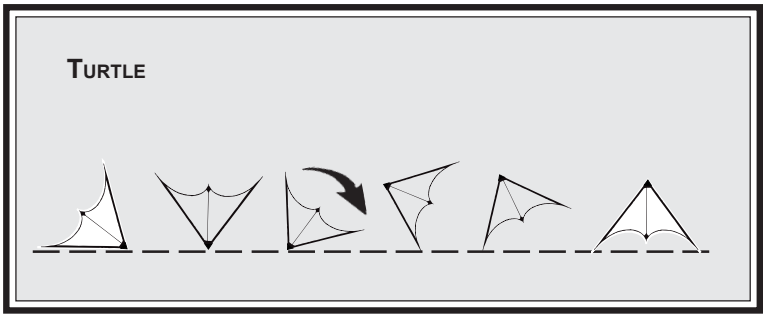
Ground Maneuvers

Just as there was a time when fliers hated light wind days, there was also a time when people thought the only place you could perform was in the sky. Others were intimidated by “ground work”. The possibility of damage to the kite, and the likelihood of line tangles or of the kite falling over into an unlaunchable position kept people from trying tricks on the ground.

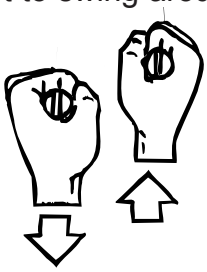
Times change, and almost every well-rounded routine now includes some kind of ground tricks as well as a landing and relaunch. Back in Chapter One, we walked you through some simple dips and more complicated tip stands. You also perfected the leading edge launch, which is no simple feat. Now, let’s try some more low-altitude tricks and techniques.

The Turtle: If you can visualize a turtle on its back, trying to turn over, then you may have some idea what this maneuver involves. It's a quick, eye catching move that involves flipping a grounded kite from a nose down, to a nose up position. Hand positioning and timing are critical.

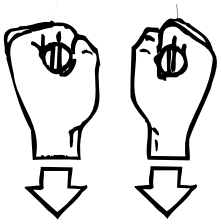
Start with the kite on a leading edge positioned off-center in the window. The kite's nose should be pointing toward the middle. If you need to, move yourself left or right to shift the kite's relative position in the wind.



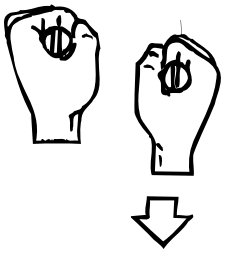
Hand controls and kite movements will, of course, be reversed depending on which half of the window you are using. Let's presume the kite is on the left side of the window. Push with your right hand and simultaneously pull back with the left. The kite will pivot on it's nose and start to swing around.



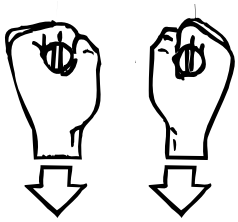
PUSH-RIGHT AND PULL-LEFT TO PIVOT THE LEFT WINGTIP



STEP BACK TO PIN THE WINGTIP TO THE GROUND



PULL-RIGHT TO PIVOT THE RIGHT WINGTIP OVER



NOW YOU CAN LAUNCH STRAIGHT UP

We call it a push to indicate the direction your hands move. Actually, it's more of a "flick". There is no need to be overly forceful.

As the left wing comes forward, step back. This will bring the wingtip in contact with the ground.

With the left wingtip "pinned" to the ground, pull back with your right hand. The right wing will now pivot around. This leaves you in a standard launch position.

It also leaves anyone who blinked wondering what happened and how they missed it.

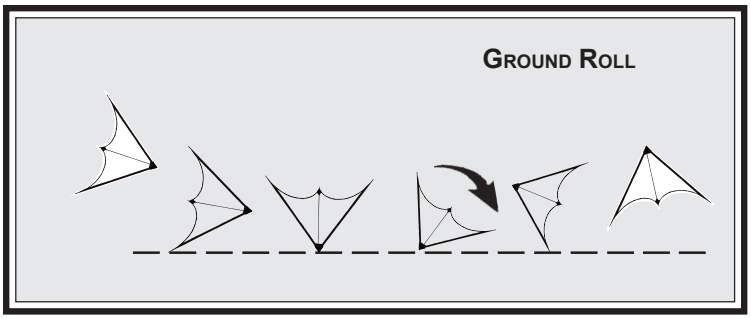
One of the most difficult aspects of trick flying, is finding good names for new maneuvers. Even worse is getting everyone else to use the same name.

The Turtle is a good example. There are at least two moves people call the "Turtle". One is on the ground, and the other is done in the air. It's understandable that the name is so popular since it is a great description of a move that involves turning the kite right-side up.

Common names and terminology have spread as fliers travel from event to event. The popularity of more timely and global communication, like kite newsgroups on the InterNet, will undoubtedly help encourage consistency.

Or maybe they will just add to the confusion .... :-)

Ground Roll: In many ways, the Ground Roll is similar to the Turtle. You contact the ground, nose down, and leave nose up. But in this case, you rely on the flight momentum of the kite to power a leading edge landing into a leading edge launch.



As with most nose-down launches, you will have better luck if you are off-center with the nose pointed toward the outside of the window. Fly toward the ground at about a thirty degree angle.

If you are flying to the right, contact the ground with your right or "lower" wingtip.

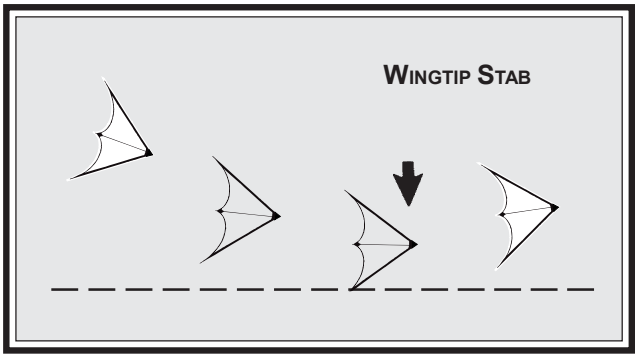
As the kite rolls over toward it's nose, push your left hand forward. This is a light, quick jab, not a hard push. Then, as the center spine comes vertical, pull back with both hands. This should lift the nose and drag the left wingtip, similar to a normal leading edge launch.

As the kite comes out of the roll, step back and lift off.

When you set-up for the Turtle or Ground Roll, make sure you are positioned properly in the wind window. The nose of the kite should point toward the outside of the wind.

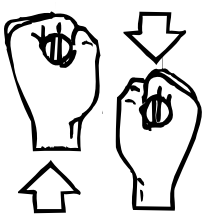
Wingtip Stab: Here is another "touch and go" move. You touch the ground, and then go right on flying.

Start in a low horizontal pass. If you are flying to the right, push-left and pull-right to turn sharply toward the ground. Immediately, reverse hands. Push-right and pull-left.

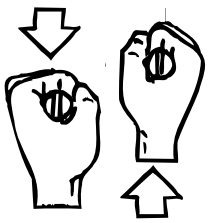


If your hand controls were slower, the kite would turn groundward, make contact on the right wingtip, and then turn back toward the sky. But because you were lightening fast, the kite lurched sideways while still moving down and "stabbed" the wingtip into the ground.

To better anchor the wingtip, step forward and let the kite lean back. Maintain tension on the left line to hold position. When you are ready to launch, pull back with your left hand and turn the kite back into the wind.



PUSH-LEFT AND PULL-RIGHT



THEN IMMEDIATELY REVERSE

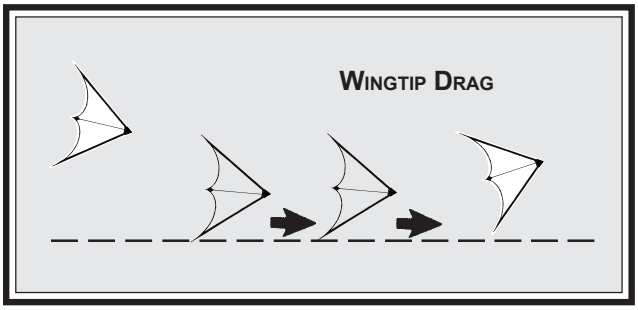
You can use wingtip stabs to vary the pace in a routine or punctuate music. Add several of them to a long sweeping ground pass, or for a real thrill, pop one in at the end of a fast vertical dive.

Ground maneuvers put a lot of wear and tear on your equipment. Spars are flexed and pounded against the ground. Sails can catch and tear as they are dragged across the surface. Lighter flying lines can break.

If possible, begin your practice with an older kite. That way, if something does go wrong, it won't be with your best gear.

And while you're at it, be careful with yourself too. We've seen fliers injure arms and shoulders "popping" too hard and fast.

Wingtip Drag: Instead of sticking a wingtip into the ground, you can try dragging it along. Doing it for a few feet is actually pretty easy. Doing it for a longer distance - now that's hard.



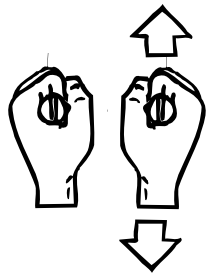
Tip Drags work best when you are steering toward the outside edge of the window. Approach the ground in a low horizontal pass. Continue a smooth descent until your wingtip actually touches the ground.

If you hit too hard, the kite will "nose-in" and you'll end up in a Ground Roll. So maintain steady control.

You want enough downward pressure to keep that wingtip sliding along the ground, and also enough forward motion to keep from crashing. Try moving back to maintain power.

Lock one hand in place to stabilize the line closest to the ground. Then make minor adjustments with the other hand.

A long Wingtip Drag is a thing of beauty. To make it even better, try transitioning in from a vertical dive or finishing the maneuver with an intentional Ground Roll.



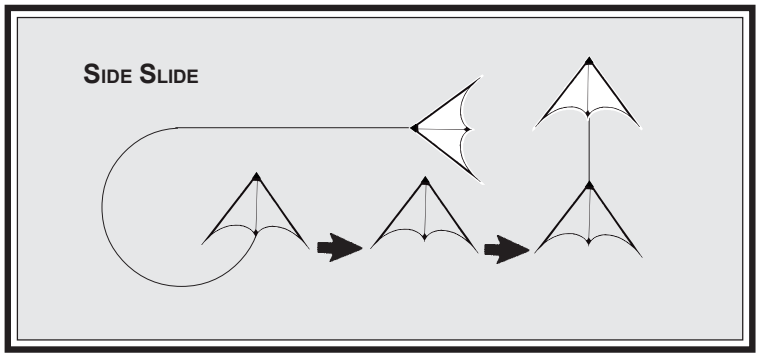
Lock the Lower Hand and Steer with the Other

Ground maneuvers are best done on soft, level ground. It isn't easy to maintain a long drag or prepare for a roll on higher grass or bumpy terrain. Similarly, wingtips just don't stick in hard dirt or pavement. A beach works much better.

Slides and Spins

If you can do the Axle, you can do almost anything. Combine the momentum of straight flight with hand movements that stall and spill wind from your sails. Experiment. Practice. Innovate. The combinations of Slides, Stalls, and Spin maneuvers are endless.

Side Slide: This is a move where you use the momentum of a turning kite to push sideways - perpendicular to the normal direction of flight. With practice, you should be able to hold this slide across the entire window.

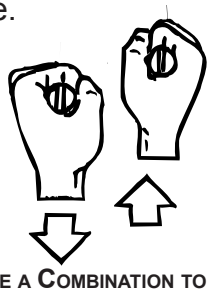


Start in a horizontal pass to the left. Build up some speed. Then, as you approach the outside edge, use a push-pull to turn under as if you were planning a full loop that would exit in a vertical climb.

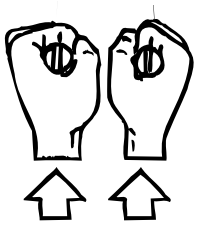
As the spine comes around to vertical, snap your hands back to the normal position and step forward.

Normally, this would stall the kite, but the power of the turn will push it toward the center of the window. Now all you need to do is maintain balance.

Maintain even line tension and keep walking forward, slightly in the direction of the slide. Use a light touch on your handles to monitor line tension and make minor corrections. And remember that setting your tow point low will make it easier to maintain a stall longer.



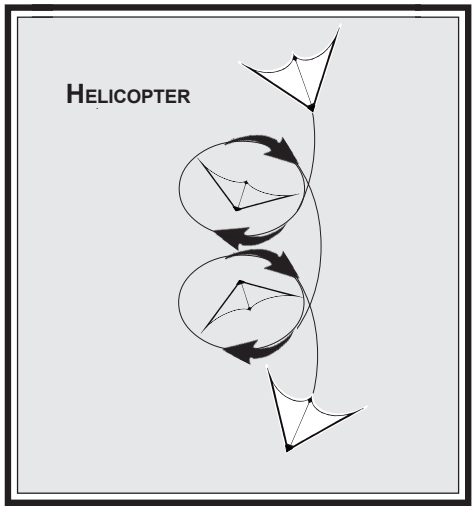
USE A COMBINATION TO LOOP UNDER



SNAP BACK TO NORMAL AND MOVE FORWARD

When you are ready to end the slide, you can pull back on both lines to lift into a vertical, or pull back on one to turn sideways. Better yet, try transitioning into another maneuver - like a spin landing.

Helicopter: This is a tough one. Think of it as a “Falling Axel”. A regular Axel is hard enough, but with the Helicopter, you have to worry even more about tangling your lines.

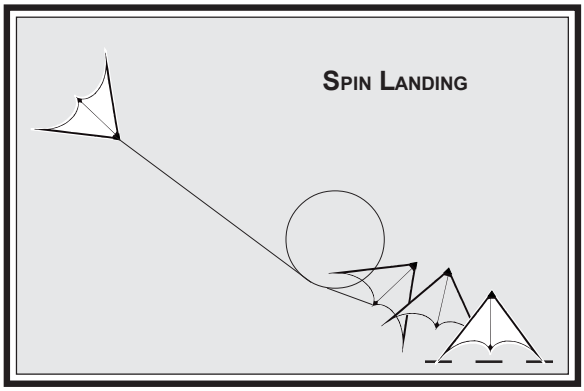


In Chapter 1, you learned the basic steps for an Axel. Push and hold to stall. Pull one hand back to lay the kite on its face. Pop one line to spin. And then pull back on both lines to resume flight.

For the Helicopter, add one more step. Move forward as the kite rotates. Let it float back toward the ground as it continues to flat-spin.

Sounds easy. Right!

Spin Landing: This is a variation on the Three-Point Landing that involves a transition from a spinning turn. Many fliers say it is easier than the more traditional landing since the loop spills a great deal of wind from the kite's sail and it practically lands itself.



As you approach the landing area, pull the kite into a tight upward loop. Normally, you would pull to power into a turn, and pull again to power out. This time, however, as the kite completes the spin and comes around with its spine perpendicular to the ground, push with both hands. Stall and step forward to drop the kite onto its wingtips.

Hand movements are just like the Side Slide, expect that you step forward more to drop the kite onto the ground.

Landings are usually easier toward the edge of the window, but the Spin Landing can be done almost anywhere. Try adding one at the bottom of a power dive right in the center of the wind. The fast roaring turn followed by a graceful stop surprises people.

You'll find the Spin Landing easier with a turn that goes under, but it also works with a turn that goes over the top. See which one works best for you.

There is more to so-called trick flying than the tricks. Watching one slick move after another gets old. Transitions, variety, and timing are equally important.

The best fliers will combine spectacular trick moves with long, graceful passes and precise turns. They build a sense of drama, and then bam!, explode with an unexpected and seemingly impossible flip.

Plan a total program to get the best results.