

# The AKA Sport Kite Team Flying Handbook



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# Sport Kite Team Flying Handbook

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## EQUIPMENT

The equipment you choose to use will probably account for no more than 10% of your success - unless it is bad or improperly used. It will then account for 90% of your problems. Darrin Skinner of Team Tsunami said, “Good equipment won’t make you good. Bad equipment will make you bad.”

Here are some equipment related discussions that will help keep your team out of trouble:

- ◆ Team kites must all be the same type, brand, and age. Kites of different brands or different ages are a lot harder to keep in tune with each other. Consistent kite speed is one of the most important parts of your team staying in sync with each other. It is also important to have identical frames in each kite.

- ◆ Focus on what type of kite your team wants to fly, preferably one that is more controllable and slower than you would use for individual flying. Kites that are more stable with minimum over-steer are your best choice for team flying. More radical kites are much harder to keep under precise control. Since much team flying relies on watching other members’ kites in order to stay in sync, it is important that your kite have a solid, smooth feel to it. Use kites that are not fast and do not have very sensitive control inputs. Use kites with high tactile feel. In other words, your kite should be stable enough and provide enough feedback to let you fly it smoothly without really looking directly at it or concentrating solely on it.

You will look a lot better in the sky if your kites are not wobbling or making quick, jerky correction movements. It is impossible for this type of motion to be precisely matched by all of the kites in the team and, therefore, should be avoided. *Hint: Adjusting the bridle to pull the nose in will help smooth the kite out a little bit.*

With larger kites, it is easier to make it look like they are flying together because the percentage, or ratio, of kite size to error size is smaller. They are also easier to keep in sync, because they are generally slower in straight line flying and their turning speed is slower. This gives you more time to react. Big kites can also lift heavier flying lines, reducing the number of breaks, especially when wrapping or weaving.

Remember, in terms of style, team flying and individual flying are as different as night and day. You are not going to be doing the same tricks and moves.

- ◆ Never team fly on short lines (less than 120 feet).



- ◆ Flying lines should be new (at least for competition) and of standard lengths, type, and weight. New lines are slicker and create less binding when lines are wrapped or twisted. Using different types of flying line or mixing weights will increase the probability of one line cutting through another. It is also important to fly the same weight of lines, because not doing so will dramatically affect kite speed. This is due to the difference in wind drag over dissimilar line diameters.

- ◆ Stagger your flying lines 3 to 6 feet in length. This will reduce turbulence between kites. It will also keep your kites from colliding head on and breaking spars. Instead, kites will collide with your flying lines. Staggering line lengths also helps in executing the “Refueling” or “Docking” maneuver (each trailing kite flying up behind its leading kite so that its nose is in between the lines of the leading kite).

Example:

1st or lead kite	145 ft.
2nd kite	140 ft.
3rd kite	135 ft.
4th kite	130 ft.

Another technique for achieving kite stagger is to use equal length lines, but stagger your body positions. This has some advantages when executing certain maneuvers, especially those where kites are not following in sequential order (i.e. kite #2 is leading #1, and #4 is leading #3); or maneuvers that are flown from an opposite direction in order to achieve proper positioning; or maneuvers where kites cross each other’s path in an unusual order; or where drastic speed control is necessary

to accomplish a certain maneuver. This method of staggering, however, is much more difficult to do properly and is not recommended for new teams.

◆ The most sophisticated way of setting up your lines is to use about 100 feet of Spectra line near the flyer. Then using a splicing kit, splice the ends of the lines with 20-50 feet of Kevlar of the same weight. This will keep you from cutting your lines with kites. When using this arrangement, you should make the Spectra portion of all lines equal in length and vary the length of the Kevlar portion in order to achieve the desired stagger. (Note: if you are using small kites or kites with bridle points that are close together, care should be taken to make sure that Kevlar is not at or near wrapping points. Also, since line ends cannot be periodically rotated or swapped, the lines will not wear as evenly.)

◆ A simpler and more convenient way of setting up your lines is to use 200 pound test braided Dacron extensions. This is what our team does. In this arrangement, Spectra line is used to set up all lines equal to the length of the shortest position (#4 flier). Then, braided Dacron extensions are larks headed to the ends closest to the kites for lines #1, #2, and #3, with nothing on #4. The lengths of the extensions are varied in order to achieve the desired stagger (12 ft., 8 ft., and 4 ft. for our team).

There is a small amount of stretch introduced by the Dacron; however, since the lengths involved are very short, the effect is negligible. Also, because the lengths are so short, the knots will not interfere with line wrapping or weaving.

◆ Keep a variety of line weights for different wind conditions. Our team has sets of line in 50 pound, 90 pound, 150 pound, 200 pound, and 300 pound weights. Each weight set contains four set of flying lines, clearly marked #1, #2, #3, and #4, and one additional set marked



#5 in case of breakage or for use by the alternate flier. Each weight set could have its own set of extensions for staggering lengths.

A better way, though, is to leave the extensions on the kites. Doing this will allow the lines to be interchangeable among flying positions and allow end-to-end rotation. This way, line wear will be distributed more evenly.

◆ Team flying is more risky than individual flying, so always use heavier line than you would individually. Example: If you would normally use 150 pound line for an individual performance with a particular kite in a given wind condition, you should probably use about 200 pound line for team flying under the same conditions. The heavier lines also create more drag, so the kites will fly slower, providing more time in between maneuvers.



◆ Do not use less than 150 pound line for competitions or performances unless it is a 'fly or die' situation. If you do use lighter weight lines, it would be a good idea to omit maneuvers that cause the lines to wrap or weave, especially those that cause compound wraps. In a competition, it is better to work a little harder with a heavier line than to have a line break.

◆ Spare parts are mandatory for keeping your team in the air. Obviously, without spare parts, your team is like a race car driver without extra tires or an extra engine - if something goes wrong, you are out of the race! Keep on hand spare spars, glue, tape, ripstop patching tape, ferrules, necks, connectors, and bungee cord.

◆ Use wind brakes when needed, but use them wisely! In-line wind brakes are valuable tools for controlling and setting base kite speed. Our team has several sets of brakes ranging in width from 3 to 12 inches. We use them,

sometimes in combination, depending on the amount of wind, amount of pull, and the amount of forward speed desired.

When you are testing the wind conditions and tuning your kites, you should experiment with brakes to see what works best. You may find that the winds are variable, as they usually are in the Midwest. If this is the case, you will need to set the bridle positions and choose brakes that are a compromise.

Usually, a conservative pick would be erring on the side of setting the nose a little forward and using a smaller brake. This gives you the best control, and, if the wind should drop, allows you to stay in the sky and still perform. Too much brake and you may find yourselves dead in the air. If the wind picks up or a large gust comes, you can always move forward or fly closer to the edges of the window to lessen the pull and slow the kites down.

It is very important that everyone on the team use brakes of identical length and width. Otherwise, your kites will fly at different speeds and have different sized wind windows. Ideally, you want to pick the size brake that will make your kites fly at a comfortable speed and have a comfortable pull. Also, you should use the heaviest line possible before applying brakes. We use up to 300 pound line at 150 foot lengths. Many times, the heavier line will create enough wind drag to slow the kites down without the use of brakes, or it will allow you to use a smaller brake.

There are several disadvantages to using brakes:

- 1) Turning performance is hindered — turns become more sluggish and minor corrections are difficult.
- 2) You will experience an increase in wind buffeting or turbulence. Increasing your stagger by 1 to 2 feet can help here.
- 3) Speed control is more difficult. Sometimes Herculean efforts have little or no effect.
- 4) The wind window decreases significantly as the size of the brake increases. While your kites are moving faster due to high wind, you will have a smaller window in which to work. Using longer length lines (i.e. extensions) can help here.
- 5) You become more vulnerable to wind shifts and lulls.

◆ Team uniforms are a must in order to look like you mean business, especially in the eyes of the judges. Our team has a half serious motto: 'It's not how good you fly, but how good you look!' Even if only your shirts match, the judges and your opponents are going to know you are serious about your performance. This is a positive statement that will stick in their minds.



The first impression you make is important! It may also help you to pick up more sponsors and paid demos. As a team, you are among the most anticipated and watched kite flyers and it is a responsibility to make a good showing for spectators and to be a good representative for the sport and your sponsors.

◆ Have a banner made for your team with your team's name on it. A nice team banner marks your ground display so that spectators, other kite flyers, and potential sponsors can find you on the field. It makes you more accessible as ambassadors of team flying and kite flying in general. Sponsors and potential sponsors can see that you are a good representative of their products. Just like your uniform, it shows that you mean business.

If all of this talk of equipment sounds like too much, keep in mind that all it really takes to team fly is a few kites, a few lines, and some fellow kitefliers with the desire to have a good time. You probably already have most of this equipment anyhow. If, however, you are intent on having it all, you may want to try obtaining some sponsorship.



## SPONSORSHIP

Many kite manufacturers are happy to help out a new team in return for a little advertising. Whether it is discounts on equipment and parts or help with entry fees and travel expenses, whatever you get will help. The key here is: Don't get greedy! Earn your sponsors' respect first, and you will last longer with them.

Be sure to let potential sponsors know what you will do for them. Here are some examples of what you can do for a sponsor:

- Pass out catalogs, brochures, and other literature.
- Put their names and/or logos on your uniforms, kite bags and line bags
- Put their names and/or logos on your team banner.
- Have them mentioned as sponsors by event announcers when performing.
- Have their products prominently displayed in your ground display.
- Demo their products and talk about them to spectators and other kitefliers.

Keep in touch with your sponsors. After each event, call them and let them know how you did and how their products worked and were featured. Provide positive

feedback on potential product changes or offerings.

Here are some examples of who you might approach for sponsorship:

- Kite retailers
- Kite manufacturers
- Flying line manufacturers
- Spar manufacturers
- Spare parts and supplies manufacturers or distributors
- Travel and entry fees sponsor
- Corporate sponsors (e.g. Coca-Cola, Pepsi, McDonald's, etc.)

Here are some ideas for obtaining funds:

- Arrange for paid demonstrations.
- Sell your sponsors' products on consignment.
- Give kite lessons.
- Win large money competitions.
- Make kite pins of your team logo or name for selling to collectors.

Keep in mind that it is easier to get sponsors to contribute the products or services of their business rather than hard dollars.

## CHOOSING MEMBERS

Qualities most noted in team flyers start with a love of individual flying. If a person only loves to team fly, he probably will not last long or will improve very slowly. Individual skill improvement is a must for the team to improve and grow. A winning team learns from each other's mistakes and helps fellow team members with constructive criticism on problems they may be having.

Remember: team flying is supposed to be fun first and serious second.

There are many considerations which must be taken into account when putting a team together. Perhaps the five most prevalent are: Ability/Skill, Dedication, Personality Compatibility, Availability, and Goals Consistency.

Which are the most Important? That depends on what is important to you. For example, if these considerations were to be rated in order of importance for a team intent on winning the World Cup in a given year, they would be as follows:

- 1) Ability/Skill
- 2) Availability
- 3) Goals Consistency
- 4) Dedication
- 5) Personality Compatibility

However, for a team successful in staying together for many years, whether competing or not, and enjoying growth and improvement, the considerations would be rated much different:

- 1) Personality Compatibility
- 2) Dedication
- 3) Availability
- 4) Goals Consistency
- 5) Ability/Skill

The key here is understanding that, given time, ability and skills can be improved through teaching and practice and goals can change and be reassessed; while personalities and dedication levels are what they are. Availability will always be a wild card, as anything can happen. Keep in mind that team flying can get ego intensive and emotion packed. In some ways, it is like getting married, only without sex.

## **MAKING COMMITMENTS**

Every member of the team must be prepared to make a commitment to the team. Among these commit-

ments are:

- Time commitment.
  - √ Daily or weekly: How much time will be devoted to practice?
  - √ Short Term: How much time will be devoted to competitions, demos, and other performances in a season, especially when traveling is involved?
  - √ Long Term: How long does the team plan on staying together?
- Look at an event calendar and make your time commitments early. You can always revise your plans later if situations change.
- A commitment to the level of skill in practice and competition that the team wants to achieve (e.g. intermediate, experienced, or masters' class).
- A financial commitment for expenses not covered by sponsorship.
- Be prepared to sacrifice a little stubborn pride. Many successful group efforts keep in mind the phrase uttered at the start, "Check your egos at the door." Our team likes to practice a technique learned from the Navy's Blue Angels precision flying team. Before or after each criticism, complaint, or critique, we add the phrase, "... and I'm happy to be here."
- Do not forget to allow for spouses, families, and jobs.



Set a schedule you can live with.

## **SETTING GOALS**

To be a winning team, you must set your goals according to how serious your team wants to be. Have weekly team meetings to discuss your team's goals and future plans, as well as past achievements and how far you have progressed. This is important so that there are no misunderstandings or hard feelings.

It is unlikely that all team members will have the same view on all points. But if agreement or consensus is reached, at least there will be no unreasonable expectations.

Set your goals so that they are attainable. Keep in mind your limitations. Everyone should have a clear idea of what to expect and what is expected of them. Decide what your team wants to achieve, and then go for



it! But don't forget to keep it fun.

## **POSITIONS AND RESPONSIBILITIES**

The team leader is usually the best flier; he is someone that can easily remember the calls, and clearly and loudly make the calls. The leader must be aware of the position of all the kites and make appropriate calls that

can be accomplished given the amount of space available. The leader must also make the calls early enough so that there is time for the team to assimilate the call and then execute it on the "now" call, such that the kites are exactly where they need to be. As if that is not enough, during a ballet performance, this all needs to happen in sync with the music.

The most important quality of the leader is **CONSISTENCY**. His calls, flying style, timing, and window positioning must always be consistent. If not, the team will appear to be confused and the other members will probably quit from frustration.

The second position is responsible for "setting" the spacing. Setting the spacing means choosing the distance between the kites that is to be maintained by all team members. The spacing should remain constant, except where specialty moves require specific adjustments.

Setting the spacing is accomplished by using speed control adjustments and by following the track of the front kite. Major speed control adjustments are done by moving forward or backward on your feet. Minor speed control adjustments are done by moving your hands in or out together. In turns, pushing out will slow your kite down and increase spacing; pulling in will speed your kite up and decrease spacing. Following the "track" of the kite in front of you is very important. This means going where the kite in front has gone instead of aiming at where it currently is.

One hint for doing this during turns is to aim at the outside wing tip of the kite in front of you. The common mistake is to aim at the tail or keel of the front kite, thus turning inside the leading kite and cutting it off.

On the edges of the wind window where the kites tend to run up into each other, a technique to maintain spacing is to "stack high" when a down turn is imminent or "stack low" when an up turn is imminent. This means that instead of running up into the kite in front of you, aim for a position above or below that kite (i.e. the outside wing tip again) only this time, as you overtake the front kite, maintain the spacing you have set by being above or below instead of behind. If the second kite does this, the remaining kites in the team should follow suit. (Note that this is one technique for stopping or slowing the team to match the music while still maintaining spacing and line position.)

The second position is probably the best spot to put the weakest skilled flier on the team. This is because this position has less to worry about than any other position. All team members should be looking at all of the kites, especially when making adjustments. But, if one



flier is having problems doing this, then it will be easier for the other fliers to adjust to him when he is flying in the second position.

The third position is responsible for matching the spacing set by the second flier and *setting the line*. Setting the line means adjusting side to side position of the kite so that the proper formation is achieved. This is done by looking at the first two kites and visualizing what the formation should look like. It is called setting the line because the simplest formation is a straight line.

It should be noted again that all fliers must continually watch the entire formation and adjust their own position so that the desired formation is “fine tuned”. The third position will also be a leader for the fourth flier when the team splits up during the “team leader” calls.

The fourth or last flier does clean up. He is responsible for averaging the spacing and line. Averaging means that this flier looks at the spacing between the first and second kites, and the spacing between the second and third kites, and makes the spacing between the third and fourth kites an average of these two distances. Likewise, averaging the “line” would mean looking at the line or formation of the first three kites and determining his position by splitting the difference. By doing this, a minimum of adjustment will be needed by the other kites of the team. Also, any minor errors or mis-positioning will be “smoothed” out this way. This is how this flier “cleans up” the team.

Additionally, the fourth or last flier’s flying lines are usually the shortest on the team, so he will have the smallest wind window. Because of this smaller window and because of his adjustment responsibilities, this is the most physical position on the team. The fourth or last flier must move on his feet the most.

It is a good idea to have an alternate flier just in case someone gets ill, injured, or is otherwise unable to fly. The alternate should be able to step in at any flying position and know the calls and routines.

## **ORGANIZATIONAL DUTIES**

There are great many things which must be done organizationally to keep a team running smoothly. It is recommended that these duties be split up and assigned so that no one member is burdened with all of the work and expense. Here are some examples of what you may need to have done:

- Logistics (competitions, demos, and flies the team commits to)
- Making sure all team equipment is at each event
- Contacting event organizers
- Checking accuracy of event dates and schedules
- Obtaining entry forms

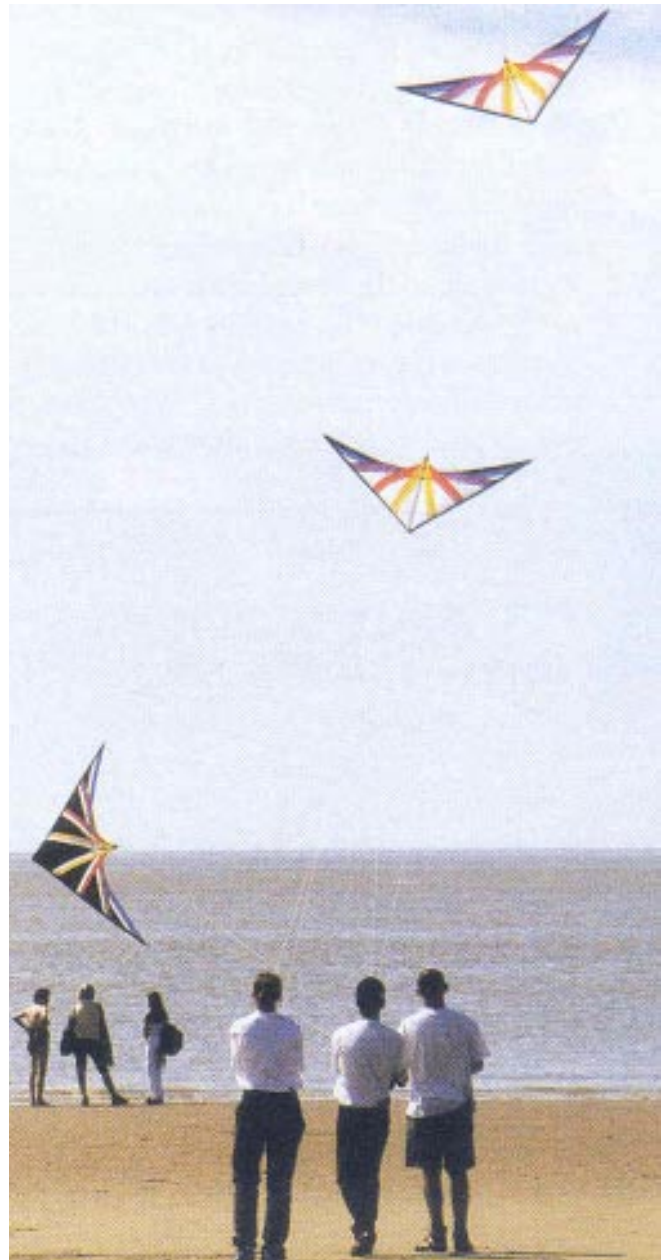
- Pre-registration of team and individuals
- Registration check-in at events
- Securing lodging accommodations and making other travel arrangements
- Setting up and manning ground displays
- Checking equipment for needed repairs or adjustments
- Turning in and picking up team audio tapes
- Contacting event announcer regarding team bio and sponsor list
- Keeping spare parts stocked
- Finding sponsors to help ease the financial burden of the team
- Staying in contact with sponsors.

## **BASIC RULES**

In order to be productive during practices and maintain professionalism during performances, a basic set of ground rules must be established. Our team uses the benevolent dictator form of government. It is ruled by Generalissimo Gunn and here are four of his cardinal rules:

1) There is a common call among all successful teams. It is, “Quiet on the line” which means everyone but the team leader must be quiet at all times. It signals the beginning of work, and focuses each team member on his flying and on listening to the calls of the team leader. If one of your team fliers has a habit of being vocal after a mistake or missed turn, then it disturbs everyone else’s train of thought. If anyone other than the team leader starts talking on the line, it makes it hard for the team leader or the rest of the team to concentrate. If anyone has a problem understanding a call, simply yell out “stations” or “fire drill”. Upon hearing this call, each flier will fly to a separate spot at the top of the window to a hover. Then you may discuss any problems.

2) Another rule is that under no circumstances is a team member to fall out of formation unless any team member has first called “Stations!” or “Fire Drill!”. If a team member falls out of formation, it can create problems such as collisions, crashes, or line breakage. Sometimes team fliers will fly out of formation because of excessive line twists or confusion. This is when you would use the “stations” call to regroup. NEVER, EVER, fly out of formation when entering the competition field or during a routine. It only makes your team look confused or disorganized. To avoid loss of control situations, plan your routine so that members incur a minimal amount of line twists.



3) Always keep a positive attitude when performing. Never look or sound angry during a competition just because someone made a mistake or missed a call. If your team or someone on your team displays outward signs of being mad during or after a performance, it only shows unsportsmanlike conduct. When judges or spectators see this, it embarrasses them and your team. It also leaves the judges with the impression that you did not do a good job. Remember, we are all flying kites for fun, and sometimes sh\*\* happens! No performance is absolutely perfect - even winning World Cup performances have had very obvious errors. When your team finishes a routine, give each other high fives, even if you know that there were noticeable mistakes made. This will give your team the

appearance of confidence and leaves the judges with the positive impression that, overall, you performed a good routine. They will focus on what you did well, and not on what could have been better. Also, turn and thank the judges for their volunteer efforts. It may not change your score, but it does show poise and that you are having a good time.

4) Be prepared for any wind condition.

## **PRACTICE REGIMEN**

Success depends on practice. Here are some steps to ensure that they are productive:

- Set a regular practice schedule that everyone is comfortable with.
- Show up for practice on time.
- Do not waste your teammates' time. No individual flying with team kites.
- Never use your team kites unless it is a scheduled team practice or team performance. This way all team kites will incur the same amount of wear and sail stretch. This should keep all of the kites flying the same speed and with the same wind window size.
- Do not overload with too much team practice, or you will burn out.
- Establish a regular practice format.

Example: 10-20 hours per week of actual flying  
3-5 hours per week of stick practice.

What is a practice stick and why is stick practice so important? Practice sticks are simply dowel rods or old spars about 2 to 3 foot long with small kite shaped cut outs attached to the ends. During stick practice, each member of the team holds a stick and 'flies' his imaginary kite, emulating how he would fly a real kite. Practice all team moves before actually flying them.

Alan Nagao of Team High Performance says, "Be faithful to stick practice; after all, two hours of stick practice are equal to about twenty hours of actual flying". This is because you will not have to untangle lines or fix broken kites every time someone blows a call. Also, bad weather will not stop you from practicing.

If you want to try a new maneuver or series of moves, use the sticks to demonstrate to the rest of the team how it should look. It takes a lot less time to visualize a new move with practice sticks than it does trying explain and learn a new move in the sky. Unlike real kites, with practice sticks you can freeze and critique a move in

progress, then resume from where you left off.

Make a diligent effort at simulating the real speed of a kite as well as its actual performance capabilities. That means do not slow down or speed up more than you would actually be able to accomplish with speed control. And, sorry, no inverted side slides into double axle wing-tip jabs.

Spend a few minutes at the beginning of each practice doing some warm-up drills. Then spend about half of your time working on basic transition moves and calls, and half of your time learning routines. Finally, allow yourselves some time to play around and experiment with new moves. You know the saying about all work and no play. Also, if you sense concentration is waning or mistakes becoming more frequent, land the kites and take a short break to relax. After a 5-10 minute rest, you can start back in with a positive attitude and renewed concen-



tration.

## **PRE-FLIGHT TIPS**

Before you begin a team practice, take the competition field, or start a performance, there are some details that should be attended to. They will help ensure that all kites will stay flying and all bases are covered.

- 1) Always check and do maintenance on all kites before you leave for a competition or practice.
- 2) Always tape your spreader spars to the vinyl connectors in order to ensure that they do not pop out during competition.
- 3) Always check for frayed flying lines before competitions or events.
- 4) Always check that the kites are bridled to fly at the exact same speed. A good way to check the kites' speed is

a flanking maneuver in the center of the wind window, where every kite turns upward at the same time side-by-side. If a kite reaches the top before the others, it must be de-tuned so that it will fly slower. If a kite falls to fly as high in the window or is slower than the other kites in getting there, it needs to have the nose adjusted slightly forward. Make sure no one takes a step forward or backward during this test. In other words, stand flat-footed.

5) Consider using voice-activated walkie-talkies. The team leader will not have to yell the calls as loudly, especially when your music is playing or your kites are noisy. Hearing calls will be less of a problem for fliers furthest from the leader. The judges and spectators will not hear blown calls or correction instructions.

6) Always show up at least an hour in advance of a competition so your team has plenty of time to set up, inspect the equipment, check the size of the flying field, test the wind conditions, tune the kites, and warm up.

7) Always attend pre-flight meetings. Turn your audio tapes or CDs in to the sound engineer at this time.

8) Never fly to poorly edited audio tapes. Always keep extra team choreography tapes handy. In fact, it is a good idea to make it the responsibility of EVERY team member to have and bring a copy of the team music to each competition or performance event. Also, make sure the tape is properly cued and clearly labeled.

9) If you have sponsors, list them on your bio sheet and give it to the event announcer. This allows you to thank your sponsors for their contributions and helps advertise

for them.

10) Always be prompt for stage-in, with kites and lines ready to go.

11) Always have a ground crew for competition to help set up the kites at the beginning of routines and in the event of trouble. If you are using walkie-talkies, be sure your ground crew has one.

12) Always be prepared for any wind condition. There is no excuse for not having the right kite or the proper length and weight of lines for a given wind condition.

## **GETTING STARTED**

Learn the basic cadence calls first before you start putting together complete series moves. This way if someone makes a mistake or trouble occurs, you can always fall into a comfortable set of commands that can be strung together into an ad lib routine without confusing the team. Once the team is back under control, you can use these basic calls to position the team for entering back into the routine, or as a setup for a series move. If all team members have the basic turn calls memorized, then you will be able to improvise without getting in trouble. And the good part is, it will look like it has been planned.

When it comes time to work on specialty series moves, you will find that most can be described as simply a combination of the basic cadence calls. Many times a specialty series is nothing more than a unique way of putting them together, or team members doing different basic moves at different times, which when viewed as a whole, create the illusion of something much more complicated than it really is.

Here are some guidelines to remember when getting started:

- Start with the basics.
- Learn the basic team terminology. Memorize all team calls.
- Work on one trick or maneuver at a time until it is perfected.
- Stick practice all team moves before actually flying them. If you are flying outdoors, then stick practice is very important. It takes a lot less time and is easier to visualize a new move with practice sticks. It is very hard to explain to your teammates what you have in mind when developing a new series of moves, especially while your kites are in the sky. Stick practice gives them a visual image of what the move should look like and lets them stop and ask questions about what they are supposed to do and where they are supposed to be. Remember the saying





about how a picture is worth a thousand words.

- Learn team compulsory figures and team precision freestyle before putting a routine to music. Learning team precision compulsory figures teaches your team the fundamentals of spacing, timing, and speed control. It forces you to watch each other's kites. Do not jump from just learning to follow to trying to put together a routine. Learn the basics first: spacing, following, timing, and control.
- When you are competing in team precision and flying the compulsory figures, fly them slow and take your time to set them up. There are no extra points for hurrying!

Incidentally, the team precision compulsory figures are easy to visualize and easy to execute, but very difficult to make look good. This is a classic example of something that is harder to do than it looks - and they are not all that impressive looking anyhow. This is because everyone else can easily visualize what they are supposed to look like too. So, any imperfections in your execution are glaringly obvious.

Once you learn to do these figures well, however, you will have gained the necessary skills to fly more complicated maneuvers with accuracy. Our team avoids putting compulsory figures in a routine. Instead, we opt for maneuvers which are more impressive because they look complicated, but are not necessarily hard to make look good.

## **FLYING STYLE**

As stated earlier, in terms of style, team flying and

individual flying are as different as night and day. You are not going to be doing the same tricks and moves. The key phrase to remember is "stay smooth".

One way to do this is to make loops a bit larger and make turns that are less snappy than might be done individually. It is nearly impossible for three or four fliers to rip a perfect 90 degree square corner at exactly the same instant when such a turn only takes a fraction of a second. However, a more rounded corner is much easier to match when the beginning and end are much less clearly defined. Doing this only takes a tiny bit longer, but it is enough time to give team members time to react and make slight adjustments. Someone who is slightly behind can turn a little sharper and faster; someone who is early can turn a little shallower and linger in the turn to let the others catch up.

More importantly, in the eyes of judges or spectators, beautifully ripped square corners that are as close as even a few 100ths of a second will appear to be off. But when the corner is rounded slightly, the viewer will tend to average out the differences and will be left with the sense that the team did it together, despite any small discrepancies.

This concept becomes even more relevant in a performance set to music, where the fliers must not only be in sync with each other but also with the music. A little extra time and the perception of togetherness can go a long way.

As your team improves, your members will get used to each other's flying style and be able to accurately anticipate the sizes and timing of each move. As this occurs, you will be able to experiment with doing some moves in a more radical style, especially where the musical choreography suggests such movement is more appropriate or more dramatic. Nothing is more exciting than a team that truly is dead-on perfect in sync with each other and the music.

## **SPEED CONTROL**

When team flying, it is important to move on your feet forward or backward in order to stay in sync with each other. This is called "speed control". It is necessary due to differences in the execution of calls (timing and style), due to variations in setting the line (cutting off or swinging wide in turns), and because no two kites are ever in exactly the same spot in the wind window, and therefore, are never flying exactly the same speed.

It is also important to move on your feet so that you are standing shoulder-to-shoulder when doing maneuvers that involve wraps or line weaving. This is to help prevent flying lines from binding up and reduces the risk of line breakage.

Minor speed control adjustments are done by moving your hands in or out together. In turns, pushing out will slow your kite down; pulling in will speed your kite up. Following the “track” of the kite in front of you is very important for preventing the need for drastic speed control. This means going where the kite in front has



gone instead of aiming at where it currently is.

One hint for doing this during turns is to aim at the outside wing tip of the kite in front of you. The common mistake is to aim at the tail or keel of the front kite, thus turning inside the leading kite and cutting it off in the turn.

About 20% of speed control is done in straight lines, while 80% of speed control is done in the turns. Everyone on the team must exercise speed control or your team will never stay together.

## **CADENCE**

The cadence or pattern of calls is the structure in which the basic language or terminology is framed. We use three different methods of cadence calls, depending on the situation.

**Two-Part Calls:** This is when the team leader or voice controller calls out in advance what type of maneuver he wants the team to perform, such as a turn, then pauses until he is ready for execution to occur, then calls out “now or “turn”. An example of this is:

*Up About...Now!*

The leader or caller must try to yell out his intentions as far in advance as possible in order to give the team enough time to visualize what they are expected to do next. Then, when all kites in position, he yells out “Now!”. Hopefully, everyone will already know what to do without thinking about it, and the move will occur simultaneously.

Additionally, the team leader or voice controller must delay slightly before he executes. This gives the other team members time to react to the execution call; otherwise, the caller will always be turning too soon.

**Short Calls:** This is when the team leader or voice controller calls out what type of maneuver he wants the team to perform, usually a turn call, and everyone executes it as soon as they hear it. This is the same as in two-part calls only without the execution call. An example of three short calls in sequence

is:

*Right! . . . Up About! . . . Loop Up!*

As in two-part calls, the team leader or voice controller must delay slightly before he executes. This gives the other team members time to react to the maneuver call.

**Memorized Calls or Series Calls:** The third type of calls are the memorized series. This is where there is a pre-planned set of moves in which everyone knows exactly what to do at each phase. The team leader or voice controller announces, in advance and by name, the series to be done (you can have a lot of fun naming them), then simply yells out execution calls only. Here is an example:

*Razzle Dazzle Series ... Turn! ... Turn! ... Turn!*

This is the best way to work out your routines. Once the music starts, it is very hard for the leader to listen to the music, watch the team to make sure it is in the right position, call out every move in advance, then call “now” so that it happens at the right place in the music and at the right place in the sky. Not only is the concentration necessary to do this difficult, but the more yelling the leader has to do, the less opportunity he has to hear the music.

Once you have a set routine, all the leader has to call are the series names in advance, followed by the one word, one syllable execution calls. It is up to each team member to memorize his part in each specialty series. Theoretically, an entire routine could be memorized and then called by repeating the same execution word, “Now!”

It is very important that the cadence be called out clearly and loudly. But, the most important aspect of the cadence is CONSISTENCY. Specifically, consistency of language used, consistency of timing and rhythm of speech patterns, consistency of voice timbre and volume, and consistency with respect to window positioning.

## **BASIC TEAM CALLS** **(DESCRIPTIONS)**

If cadence is the framework of team flying, then the language of team calls is the foundation. Unfortunately, there is no standard set of team calls. Many teams have developed their own unique system of terminology and syntax. Though there is nothing wrong with this, it becomes difficult for fliers to impromptu or “mega-fly” or do much of anything special.

The following is a list of the basic team calls our team has used successfully over the past several years. These simple transition moves are the foundation to a good routine. Plus, we have thrown in a few specialty or tricky stunts to get you started. The rest is up to you!

*Reader Advisory: The best way to show he team calls is via pictures. So, Appendix “A” has illustrations of the basic calls. The following discussion was written by and for the anal retentive. If you are not, please feel free to skip directly to Appendix “A” now.*

Commands are the most basic instructions of what to do. They should be executed immediately.

**Follow:** Fall out of whatever formation or

position you are in and fall into a basic straight-line follow in sequential order.

**Thread:** When approaching other team members from a head-on aspect, thread indicates that you are to pass each other in normal order. When passing horizontally, #1 is on top, #2 below #1, #3 next, and #4 on the bottom. When passing vertically, #1 is on the right, with #2, #3, and #4 in order of right to left.

**Stations:** Fall out of formation and go to the top of the window directly in front of you and wait. Avoid contact with whoever called stations since they are probably having troubles.

**Quiet on the Line:** Stop all talking and listen to the leader.

**Now:** This is the execution command for all basic calls.

**Turn:** This is the execution command for some series calls.

Each basic team call is made up of at least two components: 1) the name of the move, and 2) the direction in which to initiate; followed by an optional execution command. Additionally, some calls have optional modifiers that indicate such things as size (*medium, big*), member specific exceptions (*odd/even, opposite, split, team leader*), or position instructions (*head-on, thread*).

**Flank:** All flanking calls are 90 degree turns. The direction of the call is always in relation to the wind window. It is not necessarily the line you should pull to do the turn.

Syntax: **Optional Modifiers:** Split, Opposite Split, Team Leader, Team Leader Split, Team Leader Opposite Split. **Commands:** Flank. **Directions:** Up, Down, Right, Left, In, Out.

**About:** All “About” calls are 180 degree turns. Some teams refer to this as a “reverse”. We borrow it from the military drill team command: About Face.

Syntax: **Optional Modifiers:** Head-on, Team Leader, Team Leader Head-on. **Directions:** Up, Down, Right, Left, In, Out. **Commands:** About. **Optional Sizes:** Medium, Big.

**Three-quarter:** These are all 270 degree turns. They are partial circles, hence the name. You initiate in the direction called and exit the turn in the opposite direction as called.

Syntax: **Optional Modifiers:** Head-on, Team Leader, Team Leader Head-on. **Commands:** 3/4 Directions: Up, Down, Right, Left, In, Out, Split, Opposite

Split. **Optional Sizes:** Medium, Big.

**Loop:** All “Loops” are full 360 degree circles. Without a size modifier, the normal size is about one and a half to two kite widths in diameter. Medium loops are half the size of the wind window. Big or Around the World loops are full window in size.

Syntax: **Optional Modifiers:** Odd/Even, Team Leader. **Commands:** Loop. **Directions:** Up, Down, Right, Left, In, Out. **Optional Sizes:** Medium, Big.

**Loop & Flanks:** These turns are one and a quarter loops. Note that the loop is smooth all the way around. It is not two separate moves - a loop and then a flank — it is one continuous motion.

Syntax: **(Optional Modifier) Loop (Direction) Flank (Direction) (Optional Size)**

**Loop & About:** These are one and a half loops. Just as in Loop & Flank, the Loop & About is one continuous motion - a 540 degree circle.

Syntax: **(Optional Modifier) Loop (Direction) About (Optional Size)**

#### **Flank Up 2 by 2, or Flank up into a Box:**

Fliers #1 and #2 flank up on the first Turn command while fliers #3 and #4 flank up on the second Turn command. The formation should look like a square where each kite is at a corner.

Syntax: **Flank Up 2 by 2...Turn...Turn**

#### **Flank up 1-2-1, or Flank up into a Diamond:**

Flier #1 flanks up first, then fliers #2 and #3 flank up together on the first Turn command, followed by flyer #4 flanking up on the second Turn command. The formation should look like a diamond where each kite is at a corner.

Syntax: **Flank Up 1-2-1 ...Turn...Turn**

## **BALLET PERFORMANCE**

Preparing a choreographed ballet routine to music is a subject that could be a book all by itself. However, there are a few aspects that specifically apply to team flying.

- What does it take to make a successful ballet performance?

65% is Choreography

20% is Skill of which

80% is Flying Straight

15% is Speed Control

5% or less is Tricks

10% is Equipment (unless, of course, it's bad)

5% is Consistency of Performance

- Pick music that is not too fast.
- Keep choreography simple, but make it look hard.
- Following is boring and evil, plus it shows all your mistakes.
- Do not repeat moves - do the unexpected. Perhaps the most exciting maneuvers are when you do something that the judges or spectators do not expect. Throw in some surprises!
- Do not attempt maneuvers that are above your skill level or that you have not perfected. It looks better to do something simple well than to do something elaborate poorly.
- Never fly to poorly edited audio tapes. Every person on the team should bring a copy of the ballet tape to each competition or performance.



Many teams spend most or all of their flying time working on figures or a routine and tend to ignore beginnings and endings. Usually it saves time since teams rarely get to practice with a ground crew. Nevertheless, it is important to practice the three L's of synchronized flying: synchronized launches, synchronized loops, and synchronized landings. Do not forget that your launch will be the judges' and spectators' first impression, and your landing will be the last thing they see and probably remember!

Remember, keep it fun.

## **AND FINALLY...**

Remember to keep it fun, or you will burn out. If you decide to team fly just for fun and not for competition, then don't take it so seriously. But if you want to compete and be a winning team, then you must be organized and be able to handle pressure and constructive criticism from fellow team members. Phil Bazell of Prevailing Winds once said, 'If you can't stand to get your butt chewed, or if you're on a team where you won't get your butt chewed for not performing well, then you'd better get out!' As Eric Wolff of Chicago Fire puts it, "Team flying becomes addictive. The thrill is best epitomized not by winning an event, but by completing a good practice and having a large group of people applaud."

Do not be afraid to talk to other fliers - that's how we learn. Never become infatuated with showing off your own flying skills. Instead, take time at each event to watch other skilled teams or individual fliers, so you can pick up on that special trick or maneuver that may have otherwise passed you by.

When we were learning to fly kites, we were like sponges, watching other fliers' techniques and dabbing up a little here and a little there.

Don't copy someone else's style; rather, borrow a bit from everyone to create your own unique style.



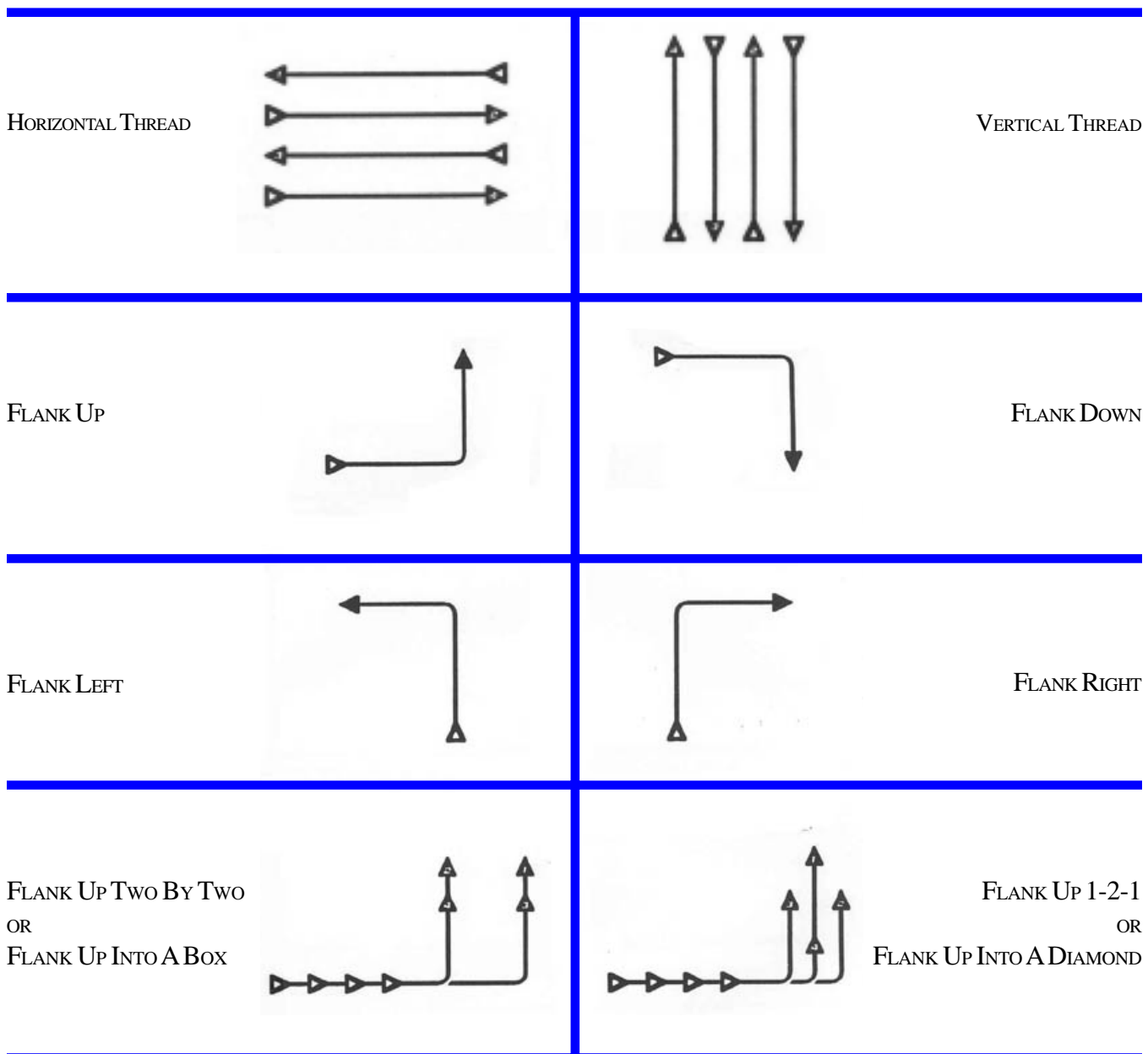
# APPENDIX A:

## BASIC TEAM CALLS (DIAGRAMS)

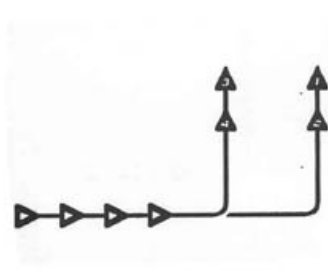
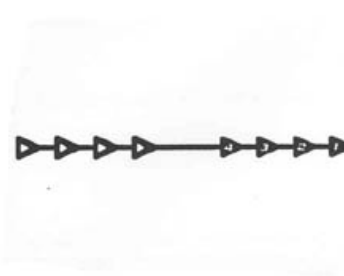
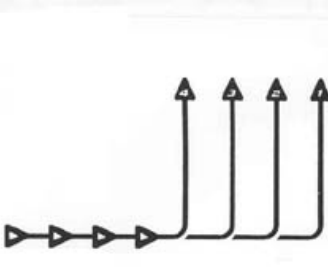
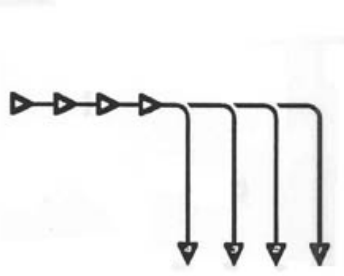
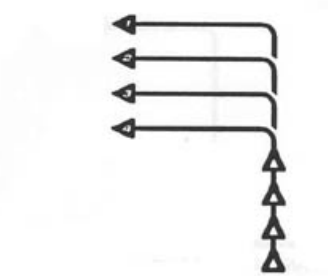
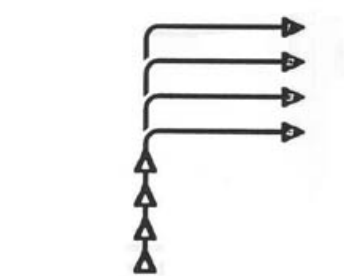
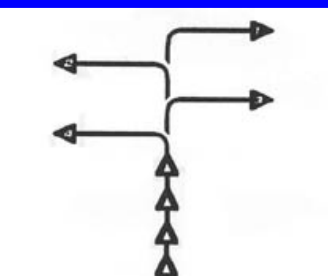
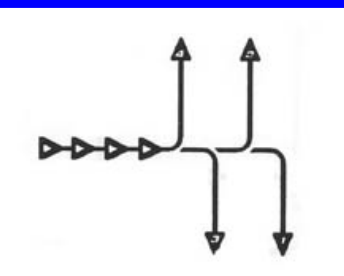
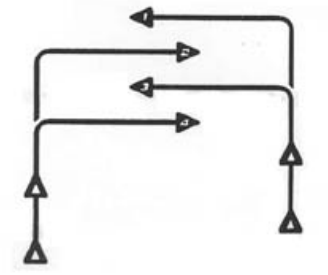
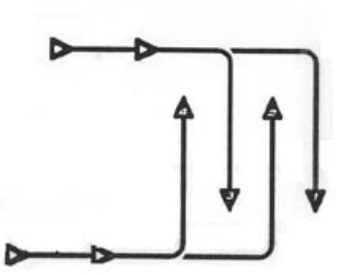
The following illustrations are some examples of the basic team calls. Not every possible combination of calls is pictured. Also, not every orientation of the call is represented. Almost all calls can be done starting from at least two directions such as from the right or left or from the top or bottom. The diagrams show only one of these possibilities.

In diagrams showing only one kite, the move is identical for the other kites in the team. Diagrams showing two or more kites are demonstrating how the kites move in relation to each other, but are not necessarily the only way they can be done. Please be aware that these diagrams are not in any particular scale and do not attempt to suggest wind window percentages.





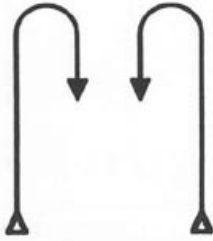
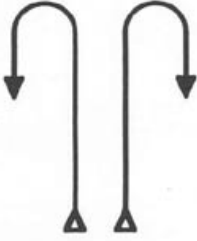

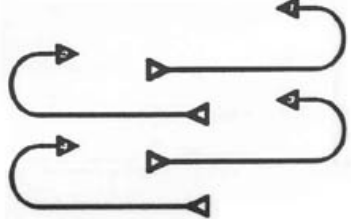


These moves will help you get started. After that, let your creativity flow and you'll find that the sky's the limit!






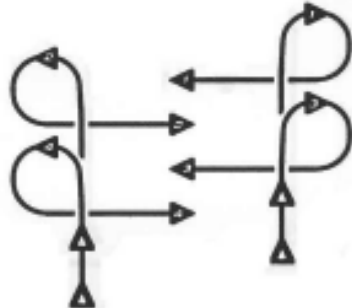
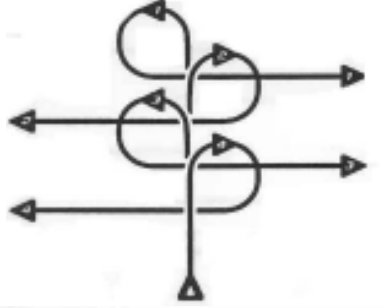
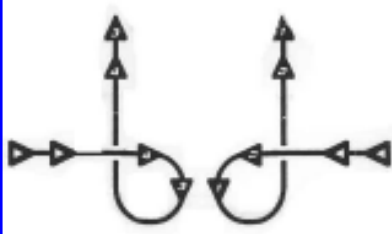




APPENDIX A continued

<p>TEAM LEADER FLANK UP</p> 	<p>FOLLOW</p> 
<p>FLANK UP</p> 	<p>FLANK DOWN</p> 
<p>FLANK LEFT</p> 	<p>FLANK RIGHT</p> 
<p>SPLIT FLANK</p> 	<p>SPLIT FLANK</p> 
<p>FLANK IN</p> 	<p>FLANK IN</p> 

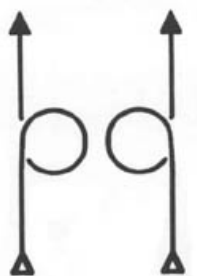
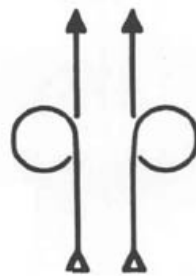
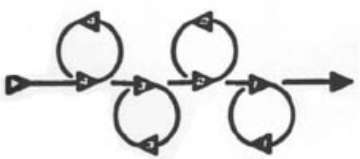
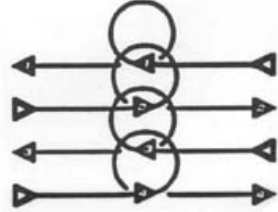
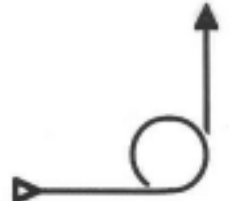
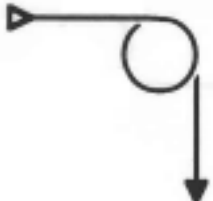


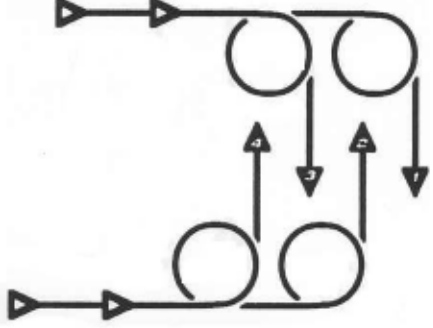
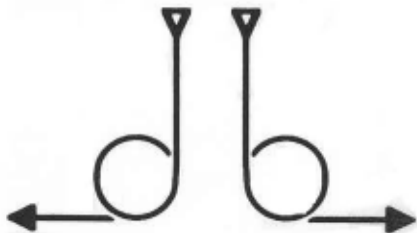
APPENDIX A continued

UP ABOUT 	DOWN ABOUT 
LEFT ABOUT 	RIGHT ABOUT 
IN ABOUT 	OUT ABOUT 
HEAD-ON UP ABOUT 	UP ABOUT 
3/4 UP 	3/4 DOWN 

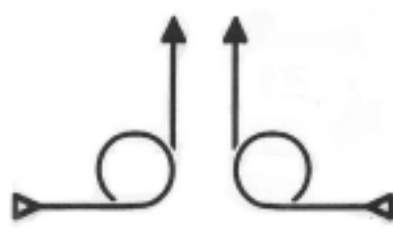
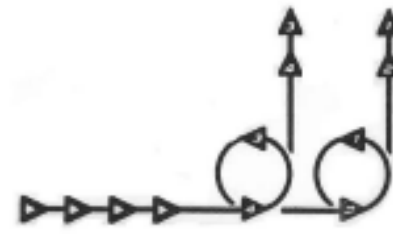
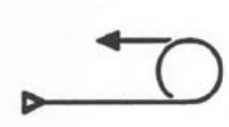
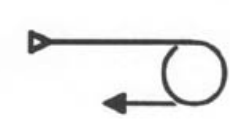
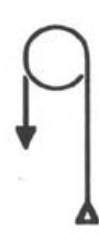

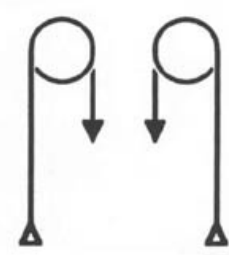
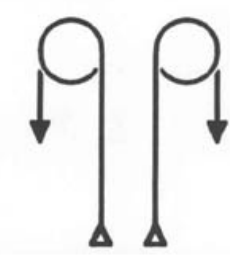
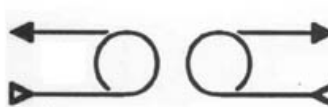
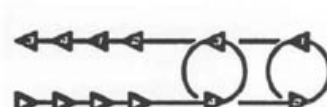
**APPENDIX A continued**

<p>3/4 LEFT</p> 	<p>3/4 RIGHT</p> 
<p>3/4 IN</p> 	<p>3/4 OUT</p> 
<p>3/4 SPLIT FLANK</p> 	<p>TEAM LEADER HEAD ON 3/4 DOWN</p> 
<p>LOOP UP</p> 	<p>LOOP DOWN</p> 
<p>LOOP LEFT</p> 	<p>LOOP RIGHT</p> 

**APPENDIX A continued**

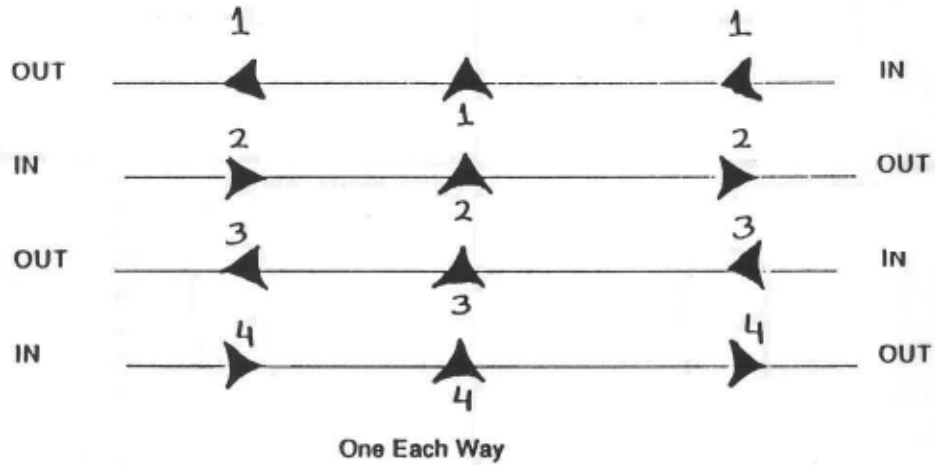
<p>LOOP IN</p> 	<p>LOOP OUT</p> 
<p>ODD/EVEN LOOP</p> 	<p>LOOP UP</p> 
<p>LOOP UP FLANK UP</p> 	<p>LOOP UP FLANK DOWN</p> 
<p>LOOP LEFT FLANK LEFT</p> 	<p>LOOP RIGHT FLANK RIGHT</p> 
<p>LOOP IN FLANK IN</p> 	<p>LOOP OUT FLANK OUT</p> 

# APPENDIX A continued

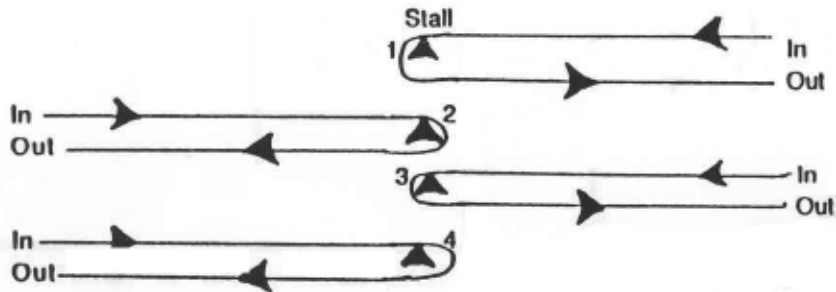
<p>HEAD ON LOOP UP FLANK UP</p> 	<p>TEAM LEADER LOOP UP FLANK UP</p> 
<p>LOOP UP ABOUT</p> 	<p>LOOP DOWN ABOUT</p> 
<p>LOOP LEFT ABOUT</p> 	<p>LOOP RIGHT ABOUT</p> 
<p>LOOP IN ABOUT</p> 	<p>LOOP OUT ABOUT</p> 
<p>HEAD ON LOOP UP ABOUT</p> 	<p>TEAM LEADER, LOOP UP ABOUT</p> 

# APPENDIX A continued

## STALL THREAD



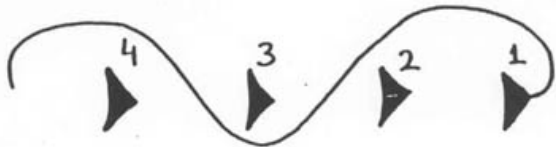
## STALL THREAD DOWN ABOUT



In this maneuver the kites simply thread. When all kites are lined up in the center, then everyone stalls their kites for about two seconds. Then all kites initiate a DOWN ABOUT reverse turn back out to the edge of the window.

## SHUFFLE (STEP 1)

Kites 2,3 and 4 repeat the same move as 1, then an up about turn is called at the right side of the window, so that 4 leads back to the left and reverses the procedure.



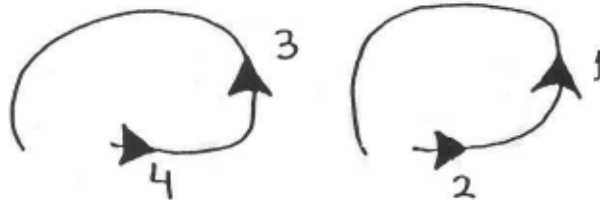
## SHUFFLE (STEP 2)

Reversal of step 1 (the untangle).



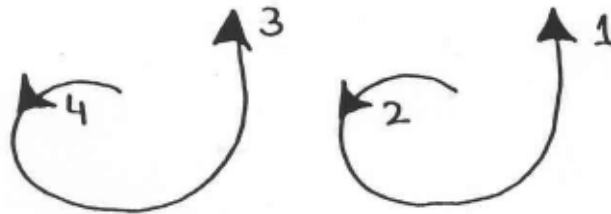
# APPENDIX A continued

SPLIT TEAM WRAPS (STEP 1)  
 (TEAM LEADER  
 LOOP UP  
 FLANK UP)

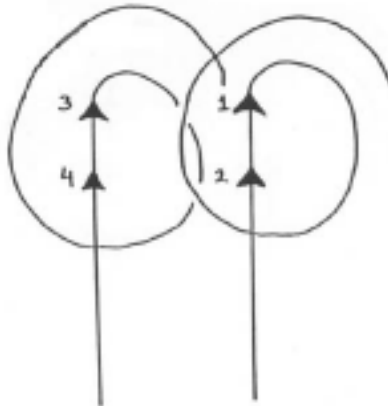


#2 follows #1, #4 follows #3

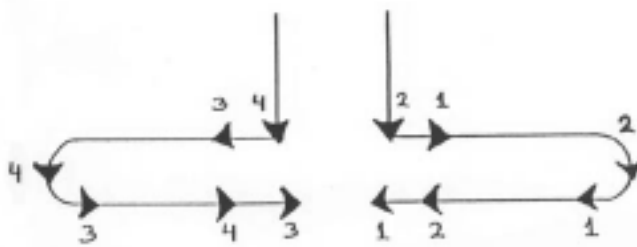
SPLIT TEAM WRAPS (STEP 2)



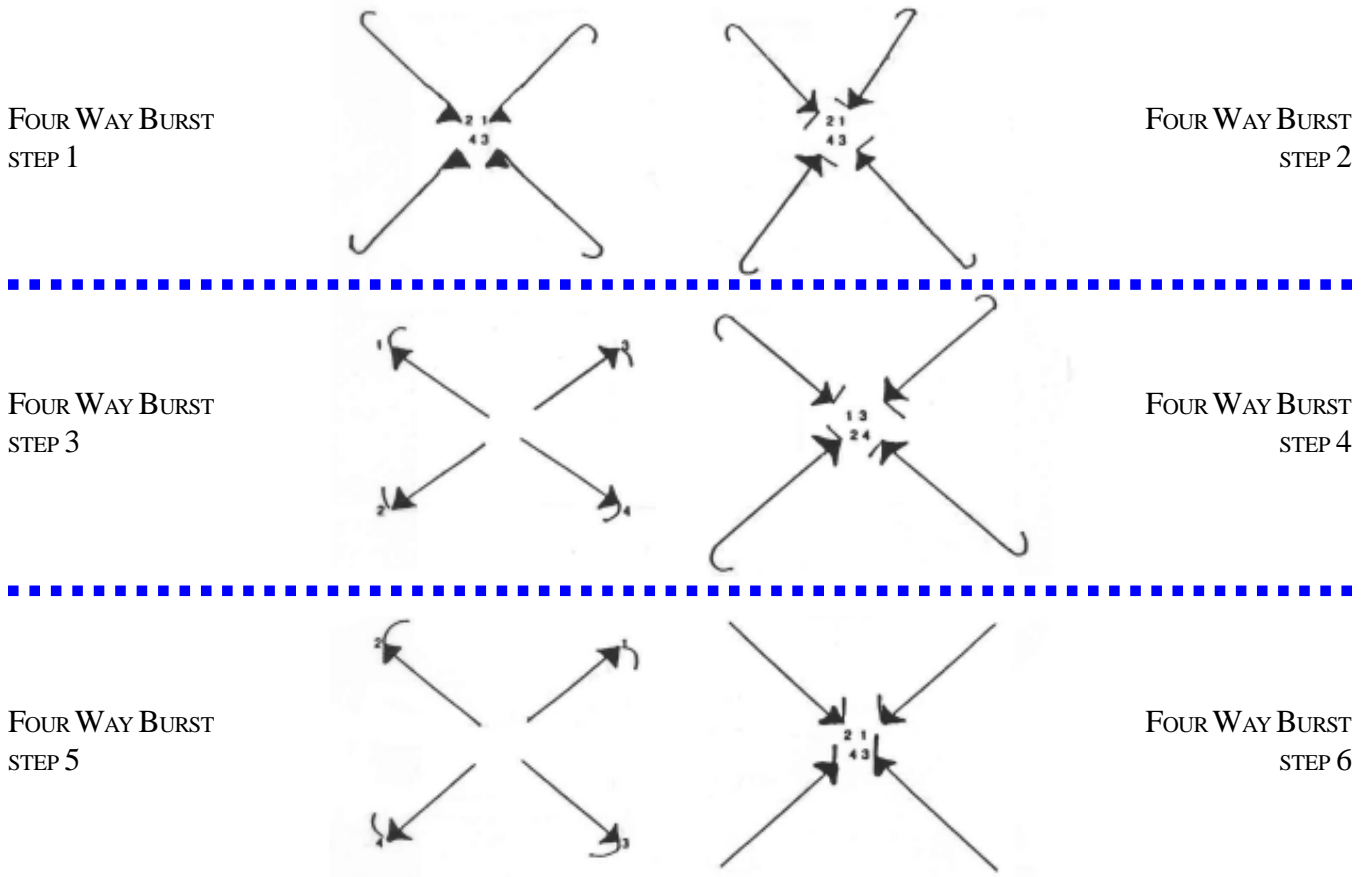
SPLIT TEAM WRAPS (STEP 3)  
 (TEAM LEADER  
 LOOP RIGHT ABOUT)



SPLIT TEAM WRAPS (STEP 4)  
 (TEAM LEADER SPLIT FLANK  
 TEAM LEADER DOWN ABOUT)



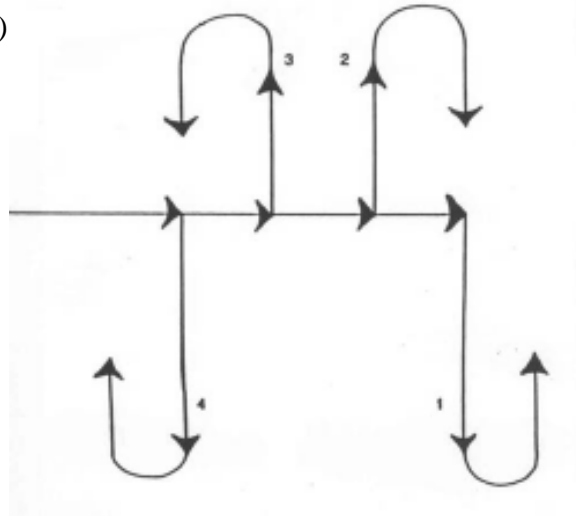
# APPENDIX A continued



# APPENDIX A continued

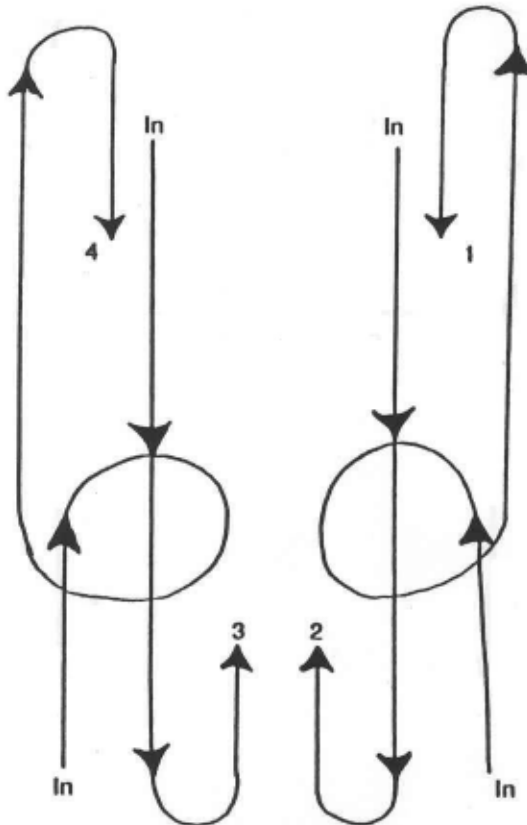
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VERTICAL RAZZLE DAZZLE (STEP 1)  
(INTO THE STARBURST)



---

VERTICAL RAZZLE DAZZLE (STEP 2)  
(INTO STARBURST)



Kites 1 and 4 loop in front of 2 and 3, then 1 and 4 continue their flank while 2 and 3 continue to flank down.

**APPENDIX B: AKA Membership Poster**



**American Kitefliers Association**  
**Come Fly With Us !**

**Join the largest association of kite enthusiasts in the world !**

**Members Receive:**

- Quarterly Kite Magazine
  - Liability Insurance Coverage
  - Monthly Email Updates
  - 10% Discount At Members Kite Stores
  - Calendar Of Kite Events
  - Membership Directory
- Annual National Convention And Competitions**

For information call **800-AKA-2550** [www.aka.kite.org](http://www.aka.kite.org)



**Membership Application:**

- New Member   
  Renewal   
  Reinstatement   
  Register me as a Member Merchant  
 Don't publish my name in the Directory   
  Don't distribute my name outside AKA

Name \_\_\_\_\_ Spouse \_\_\_\_\_  
 Address \_\_\_\_\_ Email \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Home Phone \_\_\_\_\_ Work Phone \_\_\_\_\_  
 Other Family Members \_\_\_\_\_

Membership Dues	1 yr	2 yr	3 yr	Amount
Individual Kiting via 3rd class mail	\$30	\$50	\$66	
Additional Family per person Relatives living in same household	\$4	\$8	\$12	
U.S. 1st Class Mail add	\$8	\$15	\$22	
Sponsor Kiting via 1st mail includes tax deductible contribution	\$100	\$200	\$300	
International Members please add postage as follows:				
Canada or Mexico	\$8	\$15	\$22	
Overseas Surface Mail	\$10	\$19	\$28	
Overseas Air Mail	\$25	\$48	\$70	
Total Remittance				

My primary interest is.  All kinds of kites  
 Single line kites     Multi-line kites

Charge (Visa/Master Card) # \_\_\_\_\_  
 Exp. Date \_\_\_\_\_  
 Signature \_\_\_\_\_

**Send this form with your payment to:**  
**American Kitefliers Association**  
**P.O. Box 1614**  
**Walla Walla, WA 99362 USA**

Please remit in U.S. dollars.  
 Sorry, we cannot take Canadian cheques.