



Mark and Darryld 40ish Ways

Darryld Light (left) and Mark Brown (right), Perris Valley Skydiving

<http://40ishways.com/BWBasics.html>

BIG-WAY BASICS*

***Everything you always wanted to know about Big-Way, but were afraid to ask**

By Mark Brown

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On the Ground

Show up on time, both in the morning and for the dirt dives. This is HUGE!!!! If you are late to the call or late to the dirt dive you can get cut, or more likely not get invited back again.

Have a buddy to help keep track of call times, debriefs, gearing up, dirt diving, etc. If you see an organizer with their on, it's probably time. Try going up to more experienced jumpers and saying "I've never done this before. I know you have more experience, will you be my buddy?"

If you can't be packed by the time of the debrief (usually 20 minutes), hire a packer.

Plane Seams/Exit Frame

To understand exit frame, imagine drawing the dive on paper, then cutting the paper vertically into strips, being careful to keep one plane full of jumpers on each strip. Then stretch each strip of paper into long lines. Think of it as if the planes are driving across the page dropping jumpers as they go. If the super-floater leaves at the right time, the right-trail, second row divers will be exactly opposite the base. Simulate this during the dirt dive by first grouping your plane, then stretching out in a long line.

Dirt-Diving

Show up on time, prepared and ready. When you arrive at the dirt dive you should already know your slot, your plane, the names of those around you, and at least one base person. Typically this info will be posted. Learn your references, practice approach angle, look for possible traffic; establish where you need to be and where you need to be looking. Spot anyone you may want to watch out for.

Wear your jumpsuit. Look at and memorize the jumpsuits of people in multiple reference points; your clone, those next to you, opposite you, etc. Have all of your gear ready by the time of your dirt dive, including sleeves, weights, helmet, audible altimeter, AAD, etc.

Before the NOW Call

You should know the following things:

Your equipment choices (sleeves/lead); what plane you're on; who is sitting near you; what the exit altitude is (O2?); direction of jump run; your exit position; your radial/slot; three to five references; the break-off plan; your opening altitude; your landing area; the landing pattern.

Loading the Plane

Load in the reverse order of exit position. Ideally, for ease of lineup, you will sit across from the jumpers in front and behind you. So the 1st, 3rd, 5th out will all be on one side of the plane and 2nd, 4th, 6th will sit on the other side.

Think about this stuff before you get to the plane. Know the jumpers who leave after you, and don't get on the plane before them.

If you have an issue (bad knee/back, etc.), think about the benches that will be lifted (otter; starboard and back bulkhead, sky-van; both aft). Work with your team to avoid un-needed suffering.

The Ride Up

Use this time to relax and visualize; try to be quiet.

Don't over dirt-dive. Just go through your plan a couple of times.

Don't be in a big hurry to stand up. Standing or kneeling burns up way more energy than sitting. Try to do all your putting on's, adjustments, and checks with a minimum of fuss. Watch out for chest straps, bridles, loose reserve handles, etc. of your fellow jumpers, and give or ask for pin-checks before O2 turn-on or well before exiting. Plan ahead so you can take your time and NEVER feel rushed.

The Ride Up with O2

First and foremost don't get all amped. You will have 20 minutes before reaching O2 turn on. There will be plenty of time to get the hoses un-tangled.

When hooking up, think about where you are sitting relative to where your exit jam position is. How will you move to exit position/stow your hose while staying on O2 as long as possible and not delaying the process.

On O2 jumps, avoid extraneous movement, and REALLY try to stay sitting as long as possible. Sit still and avoid talking.

How to Use Oxygen:

Some valid methods are:

1. Cannula up your nose (works well but can be difficult to get un-tangled).
2. Hose inside full-face helmet. If you have a full-face, put the hose so you can feel O2 flow against your cheek. Not in your eye!
3. Hose in mouth. Hold with teeth, keep mouth closed, and breathe through your nose. Just spit it out for exit.
4. Waving the hose under nose. This is not a good method because it requires too much fussing.

All of the above work. Choose based on your plan to exit and personal preference.

So You Got Stuck as O2 Monitor

Note that the person best positioned to turn on the O2 will probably not be the best person to turn it off.

Operating the O2 tank:

O2 tanks have 2 controls; the round heavy (usually gray) knob is the tank shut-off valve. It operates clockwise to close, (as normal) or counter-clockwise to open. It should only be all the way open or all the way closed. The knob with a bar through it (usually bronze or gold) is the pressure regulator. It is backwards from normal. Clockwise rotation or tightening will increase the pressure. This is typically a very delicate device. If turned counter-clockwise beyond the activation point, it will turn very freely. To activate and start O2 flowing, turn clockwise until a slight resistance is felt. Then very gently continue to turn until desired flow is obtained. Usually a flow indicator is installed in the pilot's hose. It will turn green when adequate flow is present. The most common mistake jumpers make is to set the flow too high. First set the flow to zero, then delicately increase until the indicator changes to green. If no flow indicator is present, put a hose on your tongue and adjust until a slight pressure can be felt. If holding the hose in your mouth puffs your cheeks, the flow is WAY TOO HIGH. To turn off before leaving the plane, just tap the regulator bar to spin counter-clockwise. It's a good idea to practice the turn-off procedure so you can do it quickly.

Jump Run

Some ONE needs to be in charge, typically a "captain" or other senior jumper. Let them be in charge! (You don't want the responsibility). If you get stuck with it, embrace it. It's a good idea to have one person near the pilot (close enough to hear) and one person near the door so they can see each other. Don't block this view! Let them make the "bench up" decision. Normally it gets put up too soon because someone over-amps. If everyone remains calm and does only what is needed, there is plenty of time to put the bench up and open the door at the same time. (think of the bench as connected to the door; door-open=bench-up, door-closed=bench down) The door is typically based on lights controlled by the pilot, but if you are at altitude, can see the DZ coming, and the other planes have their doors open, maybe it's a good time. Climb out is also typically based on lights, but usually with a back-up of some kind such as a wave from the lead plane. Again, if you see the other planes climbing out, climb out!

It's freaking freezing at 16.5K. Be mentally prepared!

Crossed Arms is the signal for aborting a dive.

Climb Out - Otters

Front front-floater (a.k.a. Floater#1): You should be kneeling in the open door holding the bar near the front with your right hand, watching both the lead plane and the green light. Ask for help if you need it. (No pressure, the whole plane is keying on you). When you see floaters or the green, or the signal from the lead plane, use your legs to project yourself up, out, and FORWARD while pivoting on your right arm and right foot. Trail your left foot, put your left hand on the plane in front of you (you can hang onto the wing if need be) carry your weight on your right foot (not your arm, as you may be there for a while). Try to stay as close to the plane as you can as you swing out. Keep your eyes locked on the lead plane and wait for the super-floater.

Rear rear-floater (a.k.a. Floater#5): Assist #1 with watching for the climb out signal. If you have camera, follow them out; otherwise, follow #1. Hold the bar with your left hand, stand, and pivot to your left. Grab the bar with your right hand about 6 inches forward of the back of the door. Carry your weight on your right foot, trail your left foot. You must let go with your left hand to clear the door for #4. If need be, you can grab the top of #4's rig after he is out (if he is pushing on you just hold him tighter).

#2 - Just like #1 but with less force.

#4 - Just like #5 but **gently**. Absolutely don't slam #5.

#3 - You are last. Use the same motion as #1 and 2, but you will need to squeeze into the hole. If you must push, push up and forward, **NEVER** down and back.

All divers: Shuffle to your position. Keep your back straight. Do NOT NOT NOT NOT NOT NOT NOT NOT NOT lean forward.

The 7 jumpers in the door (going straight out) should make a line of 3, then 2 lines of 2.

Second and third lines should be directly behind (NOT between) the person in front of them. Keep the lines forward, leaving a hole against the rear bulkhead. Imagine 3 lines of 3 with 2 open spaces. The reason for this is to keep from slamming someone into the rear bulkhead.

The remaining divers should be as tight as possible **WITHOUT** pushing.

The first person in the dive line has a critical responsibility **NOT** to push. Doing so will cause a crunch against the rear bulkhead which not only really slows the exit, but can also break people.

The trail plane floaters should climb out, then watch the lead plane for the "go".

Go with the super-floater, do **NOT** wait for the base; this is critical!

There is no reason to be looking inside your own plane. There is nothing interesting to see in there.

Climb In

The dreaded "jump abort" after climb out!!! (Remember the "crossed arm" signal?) This can be a disaster (falling off the plane all over the countryside), but if everyone does their specific job, it's not a problem, it's reverse of climb out, with specific jobs.

All divers: back up and return to your seats. This is critical to make room for the floaters and to balance the plane.

1

Floaters:

#1(front-front) - hold on tight ! You are the last to climb in (You **must** block the wind for #5 and camera).

#2- follow floater #3.

#3- start the process. Climb in first.

#4- follow floater #3 but immediately turn around, reach out, and grab #5's chest strap and pull them in (you can hold the bar and lean out).

#5-(rear-rear) Do for the camera what #4 just did for you

Camera - be strong.

Finally, #1 can just relax back into the plane.

Note: The above assumes everyone is of equal size and strength.

If you are big and strong and in the middle of this mess, this is your chance to be a hero. If you can't help, get out of the way.

Exit Timing

Go on "Go". Go with the super-floater; do **NOT** wait for the base. This is critical. Even the last diver should be moving on go. Don't just wait for the jumper in front to go. It is good to be **SLIGHTLY** pushing the person in front of you as you exit. You don't want to push them so hard they fall or get slammed into the back of the plane, but they should know you are there. Do **NOT** lean forward.

Exiting stable is less important than exiting quickly. If you are 10th out of the plane and tumble, you will be fine and can easily get stable and fly to your slot. If you take extra time and exit fantastically, you won't be helping the entire exit but instead will cause the last diver to have a longer dive.

Presentation

When Floating, push aggressively away from the plane. If you are pancaked with someone, gently move them. Use the forward throw of the plane to track up.

When early diving (Otter): Come straight out. Don't go up or down until you see the base.

When late diving (Otter): Start steep.

When diving (van): Always dive straight out (think head just below the tail), then adjust your steepness based on how far back you are. **Warning !!** When early diving from the van, the base will sail away from you and you will be instantly low (sometimes called falling in the hole). Dive flat, slow, and big, then have faith you will be okay when the base levels off.

First get belly to the wind. Next locate the base and start heading in that direction.

Adjust heading to your quadrant. Start looking for references; if possible, adjust to converge with those docking beside you.

Base - Orientation/Heading

Trust that the base will be built and on heading! Do NOT chase it! If 100 people try to trade places, chaos will ensue. Unfortunately no base is perfect. This will cause confusion as to how much to trust. For the first 10 seconds trust completely, then evaluate. If the base is turning, hopefully it will stop on or near heading. If it stops more than 45 degrees off heading, or continues to rotate, the situation is hopeless. Otherwise, carefully (watching for those beside you) adjust to the new heading set by the base.

Spacial Awareness

If you can't see the base, or it's not yet on heading, you can use your own internal sense of direction to figure out heading and where you should be going. General awareness will help. Remember jump run direction. Perris formation loads are almost always East to West.

Stadium

The stadium is a concept used to help people visualize approach angles, much as the way a real stadium allows everyone to see the field/stage (base/center). This allows for recovery in the event of minor collisions.

The size of the stadium varies. In a 400-way, the stadium can easily occupy 300 feet or more - up and out - from the base. The important thing is that the rows are clearly defined and follow each other down in an orderly fashion.

The concept is to start at the top in the cheap seats, and work your way down to the stadium floor. Each ring of non-docked people sets up at approximately a 30° angle from the row in front. As the row in front moves down and forward toward their place in the formation, your row takes its place. This continues until your row is in the formation.

Establish an approach angle no more than 35° and no less than 20°, starting somewhere about 50 to 100 feet out, and ending no less than 5 feet and no more than 10 feet from your slot

Radial/Stadium

A radial is a line from the center through your slot, continuing to beyond the red-zone (the area the camera sees). Once in your quadrant (see below definition), fly to your radial. Stay on your radial as you approach your slot. Fly close to your slot. If you are there early, leave room for others, but you should be able to stay near your slot regardless of whether others are there. You should be flying regardless of the orientation of the base. If the base is off 180 degrees, fly to your correct radial and wait for the base to rotate.

Note: You can afford to be 50% closer than you think. When you think you're five feet out, you're really 10 feet out. You will see on video that you weren't as close as you thought you were in the air.

Quadrant/Stadium

Break the formation into four "pieces of the pie". These are the four quadrants. As you dirt-dive, identify the quadrant your slot belongs to, and design your dive and approach so that you enter in a straight line to your slot. If your slot does not face straight in, then treat it as if it is straight in, in terms of radial approaches. Make the final heading change once you are stopped and in your slot.

When diving down or floating up towards the base, do not dive blindly. The fastest way to the formation is always a straight line. Too many people confuse a perceived fast "down and over" line with a straight line. Identify your diving line upon exit and follow it to your quadrant to set up your approach. It is always quicker to your slot this way even if it seems slower on a personal basis. You are only as fast as your teammates. There is no benefit in your being the fastest diver or floater.

Stay in your quadrant as you continue toward your slot. If you are flying from quadrant to quadrant within the Red zone, you are cutting people off and slowing down others.

Slot/ "On the Field"

Remember that real stadiums don't go all the way on to the playing field. This is where it gets interesting. You must be on level before getting too close, but you must not be too flat too far out. Try to match those around you but don't look away from the center.

Prepare for the formation to slow down as it builds. If you maintain a steady fall rate you will fall past the formation.

Clone

This is where you should be looking, See your clone beyond the base. Look through grips. Look for levels and angles and more references.

Angle

In this case, angle refers to a difference between your radial and your docked position.

First fly on your radial ALL THE WAY to your slot, then stop, then rotate, then STOP again, and only then pick up grips.

Dock

Stop. Breathe. Pick up grips.

Pick up your primary grip (the one closest to the base) first.

If the formation is unstable, wait in your slot but without picking up grips until the formation stops rocking.

If you see backpacks, you are too high. If you see chest straps, you are too low.

Keep your eyes across the formation, looking at/toward your clone, as you fly into your slot. Take a quick peek if needed to find the grip, but maintain your focus across the formation.

WARNING: Quick peek means VERY quick peek. It can NOT be emphasized enough that when looking away from the base, time can accelerate dramatically.

Wrist grips are good. Shoulder grips are bad. Bigways.com prefers high outside leg grips to either inside or near knees leg grips (this may be controversial).

When you dock, you give permission to be docked on: Yes, this means don't dock until you are ready to be docked on.

One-With-The-Base

Once you are docked you are now part of the base. Don't stop flying, don't be looking around (unless you can smile to the videographer), keep watching your clone, help the base keep up the fall rate, be relaxed and ready to absorb waves going through the formation.

Fly strong, "be a hero", anticipate, be proactive when trouble is about to happen, never give up, "don't become part of the problem, be part of the solution", avoid disaster whenever you can (without making it worse), take action if appropriate (don't let things just happen to you), choose to look good on video ...!

Note: "Fly strong" means with strength & determination it does not mean "STIFF", lock your position in the sky and hold it, don't just be rigid, you will still need to move.

You are responsible for the stability of the formation.

Gone Low

1. Get out from under the formation so you only affect yourself.
2. Turn sideways to the base, use the base as a reference to prevent horizontal movement, then get "big" and try to get back up. Legs straight, knees locked, arms straight, butt high, turn your head sideways looking under your arm to see the base. (That stuff they teach in the tunnel as slow fall is not extreme enough for big way).
3. Track away when you reach the first wave break-off altitude. You are now part of the first wave and you must not pull high. Tracking early will cause those above you to lose sight of you, so don't do it!

Never give up on the skydive. The big exception is if you are too fast too close and are about to take out some major section ie. the base, then sacrifice yourself by diving down and away.

Then act as if you simply went low

If you go low, consider changing your attire for the next jump - sleeves, t-shirt, etc.

Don't fly there! 90% of the time low is a (bad) choice!

Fall-rate

On jump 1, no one knows for sure what the fall rate will be. Start by assuming it will be medium to fast. The worst is when the early dockers are afraid of going low, and put on all their slow-fall stuff so they can dock. After docking they slow the base down. Be part of the solution; do what you need to do to get there AND still be able to keep the formation moving. If the formation slows down too much for the guy behind you, you still don't get a completion.

Someone is Missing

What if someone is not in their slot - to dock or not to dock? This is not easily answered. Here are some considerations:

1. Never ever on a record jump!
2. Depends on the mood of the organizer.
3. Flying no-contact can showcase your skills (this may be good).
4. If you fill someone else's slot, and then they show up, you look really bad. (Be very sure they are not coming back).
5. If you fill in, allowing a completion, you look really good.
6. If you block someone from their slot, you look bad.
7. If you keep lines and whackers close, you look good.
8. Don't cause traffic or reference issues by moving too far from where you should be.
9. Don't worry, you will have at least 1 or 2 seconds to decide!

Everyone is Missing

Hang Out, Wait for Break off.

Collisions/Incidental Contact

Collisions are the number one reason for large formation failure. Avoid them by being on your radial at the correct stadium elevation, and by being aware of those around you. Incidental contact, on the other hand, is generally a non-issue. The trick is to turn minor collisions into incidental contact by flying with awareness, attitude, and determination. If you are level with someone and you run into them, you are less likely to take them out or get taken out. Fly solid and strong. After you dock on the formation, keep flying - don't relax your body. Be prepared to keep the formation stable even if someone hits you or another part of the formation.

Often you can survive if someone:

- **passes below you** - get big and move off of them.
- **lands on you** - get big while they climb off.
- **crashes into you** - keep flying and fend off.

The trick is to react quickly and to NEVER give up.

Break-off

The exact break-off plan will be discussed on the day of the jump, but in general it will be something like: There will be two waves at break-off. The first wave will leave at 5,500 feet, at which time the center will kick their legs and everyone turns and tracks. The first group should be open between 2000 and 2500 feet. The second group will track from 4500 feet and be open between 3000 and 3500 feet.

Tracking-group

Think of it as a small fast-moving formation done during break-off.

Turn towards your leader, and follow him, typically building a no-contact wedge (like geese).

Even if tracking groups are not defined, most whackers make excellent tracking groups and keeping pace with those around you is a great way to know where people are at pull-time. This may mean tracking steeper than your best flat-track. Do you really want other people below you where they can't see you?

Tracking-leader

If you are a tracking leader, be extra sure you are on the correct path. Look back and don't out-track your group, especially vertically. If you are above them they can't see you to follow you.

Tracking-single

To get maximum separation, roll shoulders and bend slightly at the waist. When you feel turbulence on your chest and belly, you are correct. Don't dive. Remember it's more important to keep track of others than to just go fast. Also remember if you are not in the first wave there will be obstacles out ahead of you.

Pull

Pull at ASSIGNED altitude. Pulling high can get you killed. Pulling low can get you grounded. Unfortunately, there is persistent confusion about pull altitude. Is it deploy or in the saddle? With the huge variance in deployment times between different canopies, the only sensible answer is "in the saddle".

Be extra aware on tracking off, looking around, waving off and opening. Canopy collisions are the main problem to be avoided. During and just after opening is one of the most critical times under canopy. You should be able to control the opening with risers or by shifting your weight in the leg straps. Use of your rear risers must be second nature to you. Know how long it takes you to wave off and deploy. Keep looking around as you wave. If at this stage your tracking and observation has failed, and you wind up alongside somebody, you need to use your wits to ensure you don't both deploy simultaneously. In this scenario, separation is now more important than your assigned deployment altitude. As you deploy, keep your hips and shoulders level, keep your eyes peeled, and be prepared to use your rear risers to take evasion action if needed.

Canopy Flight

As your canopy is inflating you should be checking for possible traffic issues, and your hands should be on your rear risers, steering to avoid any possible collisions. Leave your booties on and don't mess with your slider. Keep your canopy flying away from the center for at least 10 seconds in order to continue the separation. Identify the dropzone and your landing pattern at altitude. Once your canopy is open, you ARE preparing for landing, the skydive is not over yet

If you're open higher than most other people, use brakes to stay up longer in order to extend the stack of canopies and free up airspace. If open lower than most, motor on down and clear the air for those above. Don't race with the designated pattern setter!

Know your equipment and get used to how the main responds during opening, descent, and final approach. Be aware of the burble behind other canopies, especially close to the ground.

Landing Zone

You may be assigned a designated landing zone. Designated landing zones are designed to minimize traffic by having smaller groups of jumpers land in different areas of the drop zone.

Make an early decision as to whether you are going to make it to your landing area. If not, decide on an alternate area. Scour it for signs of hazards, including other jumpers. Try to join or set a pattern.

You should never cut across the landing pattern and other traffic trying to make your way into your designated landing area or to try to land closer to the packing area. Landing in the most logical area adjacent to your opening point is always a safe choice.

If at all possible, stick to your assigned landing area and pattern, EVEN if it's downwind!

Pattern/Landing

During your descent, stay alert and aware of your position over the ground as well as of those around you. Check for traffic. Do slow, predictable, no more than 90 degree turns. You should have a plan for your descent using reference points in relation to the landing area. Know the landing pattern direction before take-off.

Almost anything is better than to meet a canopy going in the opposite direction. Keep in mind that the lower person always has the right of way, under canopy. Land straight-in if possible. Someone may be approaching faster than you from behind.

Fly conservatively. Save your spirals, CRW, sashays, or swoops for smaller loads.
Keep your head on a swivel the whole way down.
You are "Pilot in Charge", so act like one.

If a pattern setter has been designated follow them even if some one else gets down first.
If the disagreement is on the grass, stay off the grass.

Clearing Runway

As soon as you land, turn around to see who is about to plow into you, then gather your canopy and move to the side of the landing area. Then you can fuss with goggles, gloves and toggles.

Debrief

Video debrief is usually about 20 minutes after landing. This is a time to learn what everyone did right and what needs correcting. It is for the captains to correct and point out problems. The goal is to learn and keep a positive atmosphere. If you hear something bad about yourself, remember they are only identifying opportunities for improvement.

Debrief etiquette: Do keep your mouth shut. Don't argue with the organizer.
If the organizer points to you on-screen, clearly state your name. Don't say "ME".
Don't start explaining. Don't assume it's bad.

Most problems we see late in a dive are caused by poor decisions early in the dive. As you review your own performance, try to find the first pebble in the avalanche. Video can only see a part; use your memory to fill in the gaps. It helps, shortly after landing, to go back and re-play your internal video from the VERY beginning (at

the door?) to re-enforce your memory.

If you have to give a comment about something unsafe or some other issue, it is best to do it privately with either the LO, plane captain, or another senior jumper. It is good to vet "issues" with a more senior jumper first before bringing them up.

Listen to and learn from the feedback given to others.

On Pre-builds

Pre-builds are controversial, so know your organizers' position.

Pre-builds can be started before the base/docking-point is built.

When docked in a pre-built line, it is not necessary to look side-to-side to determine level.

One person not flying well in a 2-way will be obvious and do much less damage than if they are dragging the base around.

Two or more together will "wander" less than one alone.

Waves going through the base will not affect un-docked lines.

If the base never stabilizes, at least you get to touch someone!

On Equipment

It can be very cold at high altitude. Full face helmets have been known to frost over, be prepared/take precautions. When putting on warm clothes be sure you don't change your fall rate but don't under dress to the point of degrading your flight performance. If you are in a "cold seat" consider blankets etc. Your teammates will gladly stow them forward (as opposed to trading seats with you)

If you have a super high performance canopy consider using something more mellow. If you have a super slow opening canopy definitely change it. (an assigned pull of 2200 feet plus a 1000 foot snivel equals trouble)

If you change a rig or jumpsuit let EVERYONE know in the dirt dive. You may be their critical reference.

Tips and Wisdom

It's usually best to blend in and not get noticed.

If you are flying around in the red zone, you are noticed.

If you are late to a dirt dive, you are noticed.

If you argue with the organizer, you are noticed.

If you blame others, you are noticed.

If you fly to your slot and are on time at calls, you only get noticed in a subtle positive way.

The less the organizer thinks of you, the more they think you are doing your job.

If the organizer suggests make an equipment change (lead/sleeves/shirt) DO it.

Little good ever comes from arguing with an organizer.

Resist blaming others for not getting in.

Normally you can be stopped in your slot and not take grips for a very long time and still not cause delays for those behind you, allowing you to dock very cleanly. Stopping too far out not only delays others but causes you to have to start-stop-start-stop which can easily lead to a hard dock.

Go fast at the top and slow at the bottom.

Do not take the scenic route. It is better to go slower in a straight line than faster in a huge arc!

Rotating formations rarely build. Only you can prevent/stop it.

If you are fighting the fall rate when the formation is only partially built, you should assume that by the time it completes it will be even slower!

Ask questions of your organizer and of other more experienced jumpers about exit position, tracking group, docking, etc. You paid the money for the jump, get your money's worth of knowledge.
The walls have ears. Don't say anything out loud you don't want repeated or overheard.
Before each jump, develop a personal goal to work on during that jump. Sharing a goal with another person increases the feeling of accountability for achieving the goal, and gives both a chance to provide feedback and encouragement to each other.
A common question: Was it built? The only valid answer: My clone was in his slot (or not).
We want to "fly 25% faster at the top and get in 50% closer."
Ask to fly slots you are not familiar with. Use the opportunity to expand your comfort zone.

Inspirations (a collection of witty sayings)

"If you don't want to be low, don't FLY there."
"Go on 'go', and arch."
"Whatever you do, don't hurt the organizer."
"Always land in the same direction as your canopy (and everyone else's)."
"Track like your life depends on it; it does."
"Let us pray..... That we don't go low."
"You know the rules..... Follow them."
"Whatever happens in the air stays in the air."
"Your grip is your reward, not your Goal."
"If you look away from the center, that is when it will move!"
"Dress for success. Nobody looks stupid in a completed formation."
"Formation shape is everyone's job."
"Be the hero, absorb the bad stuff."
"Push the reset button."
"Big-way can be frustrating; be patient."
"Expect it to go well."
"Better be safe than sorry."

"Don't be shy: only the question not asked is a stupid question."

"Be prepared and ready, expect the unexpected at all times ..."

"Primary grip first, secondary grip second."
"Demonstrate a hard-stop, then take grips."
"When docked, be part of the base."
"Never faster. Instead, be more efficient and less tentative."
"Assess the situation while approaching; don't stop 5 miles out."
"When you dock, you give permission to be docked on."
"Don't make someone else's drama your drama."
"There is no spoon."
"Suck it up cup cake"
"Do or do not. There is no 'try'."

Definitions

Aft: Boat/Airplane terminology for back or rear.

Anchor: The anchor is the person on the end of a loop or whacker, who anchors/attaches the loop or whacker to the formation.

Base: The center of the formation.

Break off: The process of insuring everyone has adequate clear space in which to deploy their canopy.

Bulkhead: Wall. The rear bulkhead is the back wall in the plane.

Burble: Turbulent air behind an open canopy or above a body in freefall.

Clone: The guy who you cannot see who is your exact mirror across the formation.

Dive:

1. To fall faster than and therefore catch up with the base.

2. To exit from the inside of the plane, typically head first.

Dive-Float: To exit from the inside of the plane, typically head first, then "rise up" to the base.

Dock: The actual closing of the hand on a grip.

Exit lineup: The position of all jumpers, immediately before "go". A compressed line-up to optimize speed of aircraft exit.

Exit frame: The position of all jumpers, shortly after exiting the airplane, practiced to allow visualization of where the base and other jumpers are most likely to be.

Fall rate: The vertical speed of the formation (always too slow if you went low).

Float:

1. To "rise" up to the base.

2. To hang on the outside of the plane.

Fore: Short for forward. Boat/Airplane terminology for "Front."

Handicapping: The practice of giving shorter approaches to slower jumpers, especially when that means faster jumpers have to pass them and dock sooner.

Jam-up: A practice of the position assumed immediately before "go." Best if done in the mock up.

Landing pattern: The orderly flow of canopies approaching the landing area.

Line/loop: A group of jumpers with hand grips attaching to the formation at both ends.

Max-pull: The highest altitude at which you may have a fully inflated canopy.

Min-pull: The lowest altitude at which you may have a fully inflated canopy.

Port: Boat/Airplane terminology for "Left."

Pre-built whackers: Pre-building is the process of linking some jumpers (usually whackers) before the person they are linked to is ready to be docked on, and then docking the entire group, usually with a single grip.

Primary grip: The first grip taken, normally the one closest to the base. (Be stopped and in position on heading before taking your primary grip).

Quadrant: 1/4 of the area of the formation.

Note: As Quadrant/radial/slot refer to horizontal positions and Stadium refers to vertical position, use both for true position in 3D space.

Radial: A line from the center through your slot, continuing to beyond the red-zone.

Red-zone:

1. The portion of the skydive recorded on video.

2. An area from the center to beyond the outermost slot, inside of which small mistakes can have big consequences.

3. An area out from the base where traffic is rigidly controlled on radials to prevent collisions. Generally the area is within the camera's eye, and a significant distance out (vertically and horizontally).

Reference points: People who are used as a point of reference to guide you to your Quadrant/radial/slot.

Choose 3 minimum, preferably easily identified, and at least one in the base.

Run-out: A practice of the upper portion of the skydive from (loose) jam-up to exit frame.

NOTE1: RUN implies to hurry/rush/zoom/fly-out-of-control. Resist this and think stroll-in; calm/controlled/smooth/relaxed/aware

NOTE2: classic run-out from door jam has floaters running backwards away from the base. Don't learn this!

Secondary grip: The second grip taken.

Sheep dogging: Following another jumper towards the base without passing.

Slot: Assigned position in the built formation.

Slot flake: A jumper gripping the legs of two jumpers, looking through their hand grips. Called slot flake when the two are part of a loop or round.

Starboard: Boat/Airplane terminology for "Right."

Stinger: A jumper gripping the legs of two jumpers, looking through their hand grips. Called "stinger" when the two are part of a zipper.

Stadium: The stadium is a concept used to help people visualize approach angles, the way a real stadium allows everyone to see the field/stage (base/center). This allows for recovery in the event of minor collisions.

Super-floater: A designated floater, who on leaving before the base, is used as a "go" signal to the trail plane jumpers.

Tracking-leader: One who leads a tracking team.

Tracking-team: A group that will track together for some time before fanning out as individual trackers. Used as a method to reduce cross traffic. Think of it as a small, fast-moving formation done during break-off.

Whacker: A line of jumpers connected to the formation only at one end. Formations with two or more long whackers resemble the yard tool "weed-whacker".

Zipper: Two jumpers hand gripping each other, and hand gripping legs of the formation.

Some Numbers:

Formation loads jump run is 90-95 knots or about 150 feet/second. Assuming falling at terminal velocity of 120 mph or 176 feet/second then:

Seconds of exit time: 1/10 1 2 3 4 5

Horizontal separation: 15 150 300 450 600 750

Vertical separation: 17 176 352 528 704 880

Ideally, the super-floater leaves 1.25 seconds before the base, and the trail-floaters leave .25 seconds later, with a clean 3 second total exit (trail plane).

Sources:

Dan BC, Kate Cooper, Bigways.com, 18 years of listening.