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FORMATION SKYDIVING COACHING MANUAL



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Chapter 1: Manual Objectives

The aim of this manual is to act as a guide for coaches who are coaching skydivers through the Formation Skydiving Grading System (FS1) and provide a good foundation for them to progress. It also gives guidance on how to give and maintain your best when coaching.

The main objectives of this manual are to provide you with guidance to prepare you to become or to continue being an FS coach.

Training programmes other than the one contained in this manual are acceptable provided they meet the requirements of the BPA Operations Manual (Section 2, Paragraph 6.4.1).

This sport is forever evolving and so are the techniques that we use in all of the many different disciplines. Formation Skydiving for instance, especially with the introduction of the wind tunnels, is constantly changing and developing. The techniques that the world's top skydivers are using are developing at such a rate that they can differ significantly from one person to the next. This doesn't mean that one is necessarily better than the other as they all clearly work, but it is your responsibility as a coach to continue your development, learn a variety of techniques and to appreciate that any of them may be valid for each individual skydiver.

You must be prepared to constantly re-evaluate your thoughts and coaching techniques. Bearing this in mind, to write a manual containing precise technical details about how to coach each skill required in the BPA Operations Manual would be inappropriate. That type of manual would be out of date the day it was printed. Therefore, this manual will focus more on giving guidance on how to be the best coach possible. Appendices are provided in both the coach's and student's manuals that cover the skills required for FS1 in a manner that is not intended to be technique specific.

Chapter 2: Introduction - Becoming an FS Coach – How and Why

Who can coach formation skydiving?

Details of the requirements to become an FS coach are contained on BPA Form 134. The qualifications from the form are detailed below:

BPA FORMATION SKYDIVING COACHES

1. QUALIFICATIONS

- a) The recommendation of a CCI.
- b) A minimum of 200 freefall descents and 2 hours of freefall time.
- c) Two years involved in Sport Parachuting.
- d) Be at least a;
 - i) Category System Basic Instructor, or
 - ii) Has attended a Sportscoach UK Course on `Coaching Methods and Communication`, or
 - iii) Has specific teaching or coaching qualifications, or
 - iv) Has attended a Methods of Instruction lecture, given by a BPA Advanced Instructor, or
 - v) Has attended a Military Methods of Instruction Course.
- e) Is fully familiar with the current FS Manuals.

2. EVALUATION

Evaluation will be made by an Advanced Instructor who is an AFF Instructor, an AFF Instructor nominated by an Advanced Instructor, or an FS jumper of a proven high standard nominated by an Advanced Instructor and acceptable to the National Coach & Safety Officer (NCSO) and/or Technical Officer (TO).

3. GROUND SCHOOL EVALUATION

This will include the full ground training phase of two complete FS jumps, one of which should be a one on one and the other a group of three or four.

All applicants are strongly advised to use an FS video in their coaching programme.

4. IN AIR EVALUATION

This should be one of the one on one FS jumps. It should include the whole of the following:

- i) The brief and dirt dive, from the twenty minute point.
- ii) The climb to altitude.
- iii) The skydive where the Evaluator will make typical student errors.
- iv) The debrief.
- v) Logbook entries, which should include any corrective training required.

5. THE EVALUATOR'S TASK

The `in air` phase as already stated would include typical student mistakes. The candidate should not only be aware of these mistakes but should attempt to correct them in the air by use of signals or other means.

On the ground the candidate should make good use of training aids and have a good coaching manner.

The candidate should demonstrate a good knowledge of the basic principles of teaching and coaching.

6. SAFETY

The candidate should not attempt to take on the role of an Instructor.

In air Instructors (AFF) operate to a different criteria to FS Coaches, this should always be remembered.

The candidate should not try to change a student's emergency procedures, unless they break BPA rules, in which case they should refer to an Instructor.

The FS Coach is in no way responsible for the deployment of the student's canopy.

Always if in doubt refer back to an Instructor.

7. RENEWALS

The FS Coaches rating should be reviewed on a bi-annual basis, and should be carried out by an Advanced Instructor who is also an AFF Instructor. This may be done by perusal of the logbook (which should then be endorsed), or by ordering a re-evaluation. This same person may at any time revoke the rating should there be just cause. (The BPA should be notified).

NOTE

- i) FS Coaching Courses/Evaluations may be held at any parachute Club/Centre, provided all the above criteria is met.
- ii) Details of Sportscoach UK Courses can be obtained from Sportscoach UK, Leeds.
Tel: 0113 274 4802, Fax: 0113 275 5019, e-mail: coaching@sportscoachUK.org

You will see on BPA Form 134, that in order to gain your FS coach's qualification one of the requirements is that you have to carry out one evaluation jump. Before attempting these jumps, it is worth, if possible, spending as much time as possible with a coach or coaches in order to learn what they do and how they do it. Different coaches use different techniques and some may work better for you than others. Spending time being coached is one great way to learn how to coach, and to appreciate the different styles of coaching that can be used. In fact, to spend time with coaches, being coached is an enormously valuable way of continuing to develop your own skills as a coach.

Take note, also, that section seven of the form requires any coaches to have their rating reviewed every two years. When you approach your CCI to have your log book endorsed, take the time to consider the steps you have taken over the previous two years to ensure that you have done all you can to improve your own ability as a formation skydiver and a coach. If you feel that you could have done more, perhaps now is the time to consider your continuous personal development (being coached in the tunnel yourself? Spending some time in a formation skydiving team being coached?), making sure that the techniques you are teaching are up to date in the world of formation skydiving.

Why Become a Formation Skydiving Coach?

Before you embark on the journey to become an FS coach, take the time to consider what motivates you. What are you hoping to offer other skydivers by becoming a coach? Have you received coaching on a one to one basis or in a team that you feel you want to pass on for the benefit of others? Are you hoping to take the step one day to becoming a BPA instructor and want to use FS coaching as a stepping-stone towards that goal? Do you want to improve your own understanding of FS by taking the time to consider it on a much higher level by being a coach?

Whatever your motivations are now, as long as you are positive and determined to help skydivers improve their skills and achieve their Formation Skydiving goals, then being an FS coach for the BPA and your drop zone is a very rewarding option.

Being a New Formation Skydiving Coach

So, you have fulfilled the requirements above and been given your formation skydiving coach's rating. It is time to jump with your first formation skydiving student. This is not the time to assume that you no longer need the assistance of other experienced skydivers and coaches in order to stay safe and achieve the results that you are motivated to produce.

The formation skydiving coaches that you spent time with learning about the best ways to teach the skills required will still be available to offer you guidance, even down to specific lessons. How do you teach "Swoop to Pin" in free-fall for instance? What tips have you learned to stay safe whilst the student attempts to learn and perform a high-speed manoeuvre? Do you expect the student to avoid you if you are their "target"? Or have you briefed them that you will take responsibility to stay out of their way should they, for instance, overshoot? Before you attempt any of these skydives, make sure that you have made the very best effort to find out about what works and where the potential pit-falls are. However, as coaches, you will never and should never stop learning how you can make your coaching better.

Chapter 3: The BPA Operations Manual

The BPA Operations Manual is where we can find all of the information we need to, for instance, find out which grading systems are designed for which skydivers and parachutists and what the requirements are for each of the grades.

The “Grading System” is found in Section 2, Paragraph 6 of the Ops Manual. It states that,

“Once a parachutist has obtained Category 8 (or, prior to obtaining Category 8 in some cases. e.g. CH1), that parachutist’s continuation training will continue via a choice of various disciplines:”

To expand on this, the FS1 Grade, associated coaching and basic skills are designed for:

- a) The student who on the Category System, has qualified Category 8 and successfully completed CH Grade 1 and obtained their BPA ‘A’ Licence.
- b) The student who, on the Accelerated Free Fall Course (AFF), has qualified Category 8 and successfully completed CH Grade 1 and obtained their BPA ‘A’ Licence.
- c) Any BPA ‘A’ Licence holder and above who wants to revisit their basic techniques or improve their understanding.

The British Parachute Association Operations Manual states the following with regard to the FS1 grade:

“6.4. Formation Skydiving (FS)

6.4.1. To obtain Grade 1 in Formation Skydiving (FS1) the parachutist must, be introduced to FS by a CCI/Advanced Instructor nominated FS1 Grade parachutist or equivalent of proven FS instructional/coaching ability, have received a full safety brief and demonstrated the ability to:

- a) Control fall rate and turn in place.
- b) Dive and approach a target and achieve docking techniques.
- c) Break-off turn and track away to obtain clear airspace for deployment.
- d) Maintain good altitude awareness throughout the skydive.
- e) Control horizontal movement (forwards, backwards and sideways).
- f) Complete four points of 4-way FS.

N.B.(1) Prior to obtaining FS1, an ‘A’ Licence parachutist may make 2-way jumps, when not carrying out coaching jumps, provided he/she has received a full safety brief and the other parachutist is at least a ‘C’ Licence FS1 parachutist or equivalent, approved by the CCI.

N.B.(2) Prior to obtaining FS1, during coaching jumps, no more than one non-FS1 parachutist per group (maximum of a 4-way), all other parachutists must be at least FS1 grade or equivalent, including an FS coach or equivalent.

N.B.(3) Training programmes other than those contained in the BPA Formation Skydiving (FS) Manuals are acceptable for training for FS1, provided all the requirements of sub-para 6.4.1. (above) are met.

N.B.(4) The qualifications to become an FS coach may be found on BPA Form 134.”

It will be very likely that your student will have many questions that may sound something like: How many jumps do I have to do? What if I “fail” a jump? When can I do my 4-way jump? When will I get my “sticker” so that I can jump with my friends?

Chapter 5 of this manual will discuss the different skydives you may want to carry out with the FS student in more detail. However, the emphasis on the word “may” is important. Unlike AFF or the Category System, the FS1 progression is not designed as a list of specific skydives with a “Pass” or “Fail” outcome. This phase of the student’s skydiving will be very specific to each individual skydiver and should simply aim to assist the skydiver to obtain the skills required above. Of course, this also means that you have the opportunity to set the level of proficiency either you or the student should desire, repeating any skills as required until both you and the student are happy, and as long as the BPA requirements are met. Essentially, you are able, should a skydiver wish you to, to set your own goals above and beyond the **minimum** requirement of the BPA Operations Manual and to arrange their progression to achieve them.

It is important to note that the 4-way skydive that is often the skydive that is completed just before receiving the grading sticker is not the only aim. It is part of a series of skills that should be demonstrated before the FS1 grading can be awarded. If a skydiver can, for example, perform well on a 4-way skydive, but is unable to dive and approach a target safely, the requirements for FS1 have not been met.

Chapter 4: Coaching - At Its Best

This chapter is designed to provide information about the steps you can take to be the best coach you possibly can be. Whether you are already a coach or thinking of becoming one, the information here is designed to offer advice on how to give the very best quality you can as a coach, both on each individual jump and throughout the formation skydiving progression system as a whole.

Structure of the FS Coaching Jumps:

The structure of any coaching jump will begin with good preparation. Not just your own preparation - knowing what it is that you are aiming to teach and how - but the preparation of the student through thorough and appropriate briefing. The amount of time you spend briefing and debriefing your student does not need to be very long necessarily, but needs to cover the relevant points for that particular jump and needs to be relevant to each individual student.

As the structure of every FS coaching jump should be tailored to each individual student and their needs or learning desires, each and every jump will be different. However the following basic parts should always be considered:

Your Preparation: What do you want the skydiver to cover on this jump? Have they attempted it before or is it their first attempt at a skill? If you've not jumped with them before it is worth looking at their log-book and discussing previous skydives they have completed. Will you need to demonstrate the skill in air, or demonstrate the corrective inputs on the ground only? This is also the time to consider fall rates. Will one of you need to wear a weight belt? Or a slow fall suit?

The Briefing: Since each skydive is unique in FS, every briefing will also be different, but the following points may help you ensure that you cover the vital parts.

Firstly, cover any new skills or improvements to skills that you would like the student to perform during free-fall and ensure that the student also knows when you may perform a demonstration of this skill. Make sure that the student knows any corrective signals you may give to them in free-fall and what they mean.

The briefing needs to then include the exit you intend to do. The exits that you practise during formation skydiving progression should be varied so that as many of the different positions that could be required during a linked formation exit are covered as possible. Make sure that the student learns about exiting linked and the importance of the count during the exit, from both inside and outside the aircraft, by being able to practise not only following it but also giving it.

The end of the skydive also needs to be well briefed. At what height will you finish practicing the skill? (5000ft is recommended, especially at the beginning of FS progression training) What actions will you both be taking at that height? (i.e. tracking and direction thereof before deployment) What height is the student going to deploy their parachute? How long would you like them to track for, if at all? Do they know about the importance of knowing the run-in direction in order to avoid tracking up or down the line of flight towards other skydivers? Ensure that they know when or if they may see you track away to deploy your parachute or if you will track with them at any stage before attempting the skydive. You will need to watch or film the student's tracking as well as the main skills attempted in the skydive to be able to give corrections during the debrief. These are just some of the factors that need to be covered and concluded before the jump is attempted.

Appendices A-G at the end of this manual provide some detailed theory on each of the skills a student requires that should assist you in constructing your own set of FS coaching skydives. Part of your briefing should include the incentive for the student to complete the skill well. Aside from the requirements laid out in the BPA Operations Manual, why should a skydiver want to be able to perform a 360-degree turn in place? Why is tracking or Swoop to Pin important? Ensuring that the student knows why they are expected to complete these skills well and they have an incentive to achieve these goals is vital to making coaching effective.

The Skydive: More importantly than anything else - **stick to the briefing**. Ensure that the student is focused on the task in hand and not unduly distracted by any of the many other considerations required to carry out a skydive. Spotting, flight line checking and general care of the student is the responsibility of the coach. (However, if the coach is suitably qualified and/or the student has Jump Master Grade 1 (JM1) then the coach can use his/her own judgment in checking/sharing these responsibilities) In the aircraft, it is often beneficial to ask the student to run through the skydive either mentally or verbally to keep them focused.

If you are intending to demonstrate any skills during free-fall, the student must know when this is going to occur (either by signal or at a pre-planned stage of the jump), then carry out the demonstration in a timely, yet calm and controlled manner. For instance, this is not your opportunity to show how quickly you can perform a 360-degree turn, and feel they too need to try to turn at that speed. At the same time, this is not the student's opportunity to watch you perform perfect yet slow 360-degree turns leaving them little time to practise themselves. A good balance must be achieved for the student to feel both equipped with the information required to perform each manoeuvre, but also to be able to practise it.

Carry out any planned demonstrations at the speed at which you expect the student to attempt the skill, but do not continue to demonstrate to the detriment of the student's free-fall time. Remember that occasionally when skydivers have new skills to think about, sometimes more important ones are not carried out as efficiently. e.g. altitude awareness - maintain good altitude awareness at all times.

The Debrief: Being able to give a good debrief is a skill in itself. One commonly used technique is to firstly ask the student to effectively debrief themselves by asking them how they think the skydive went. This can help enormously when constructing a debriefing. First and foremost, the response to this question will let you know whether the student had a positive or negative experience on the skydive and you will be able to use this as a foundation for the debrief. Some students will almost complete the entire debrief of themselves for you, in which case a review of any video footage or emphasis on any pertinent points will suffice. Others will struggle to remember parts of the skydive and will be looking to you to fill in the gaps. Do they perhaps think they performed well when in fact they didn't, or vice-versa? No matter how your student felt about their skydive, there will be both positive and negative aspects of the dive that need to be discussed. A tried and tested debrief method is to start and end the debriefing on positive points. This ensures that the debrief remains constructive as opposed to critical, which makes it a much more effective learning tool.

You should utilise all of these aspects on each skydive fully in order that you give the best coaching experience you possibly can.

Using Camera:

The use of camera is not mandated for FS coaching, however it is an exceptionally useful, if not vital tool. A picture paints a thousand words and when a student thinks they are, for example pointing their toes, when in fact they are not, if they are able to see what you can see in the form of a video debrief, it is often invaluable. As a coach you should have already completed 200 skydives, and therefore, as long as you have a BPA 'C' Licence and approval from your CCI

(BPA Operations Manual Section 6 – Equipment; 6.1.) you are able to wear a camera.

The many benefits to the student of being able to see their skydive on video do not only cover minor body-position corrections. It also gives them a chance to be reminded of aspects such as how they positioned themselves for the exit (was it as briefed?), did they maintain eye contact, and when did they check their altimeter? In addition to this of course, a video is an incredibly useful tool to you as coach. It gives you a second chance to see the skydive and possibly to discover aspects of the jump that you had not already been able to conclude before or even during, the debriefing.

It can also be very useful for a skydiver to have a copy of footage of his previous formation skydiving jumps. Not only for them to review the skills that they performed on the skydive, but to act as a video log for you to review before you next jump, or for another coach to review should they wish to jump with a different coach.

Unlike days gone by when the use of camera invariably involved a specifically designed camera helmet, television set up for viewing and often an expensive camera, these days, cameras come in all shapes, sizes and prices. Ask around and find one that suits your needs and means.

Continuity and Consistency:

Ultimately, the most efficient way to coach a new skydiver to the standard of formation skydiving required to gain their FS1 qualification would be to start their coaching with them, jump regularly together and then to finish their coaching by completing all of the skills and doing a FS1 qualifying skydive together. This means that the student is able to “start from where they left off” on their next skydives. Rather than a different coach having to spend the first couple of jumps discovering any current or developing “habits” that may need correction, it is easier to move onwards with new skills.

However, in reality this is not often possible due to other commitments for both student and coach. Therefore, if you regularly jump at a drop zone with like-minded coaches, it makes a lot of sense to consider joining forces with them to help ensure that students can jump regularly. This way, as coaches you have the benefit of being able to chat about (or watch video of) the student and what skills they might be ready to attempt on their next skydives. It also gives the student a chance to jump with another coach who, whilst they are teaching the same techniques, may teach them in a manner that suits them better.

Wind Tunnel:

It would be wrong not to mention the benefits of being able to practise some of the aspects of formation skydiving in a wind tunnel. Based on the “free-fall” time that can be obtained in a session in a wind tunnel, compared to a single skydive, it can be great value for money and allows skydivers to work on their body-position and stability in detail, without the additional considerations required in free-fall. This is a great option to consider using if location and availability permit, both for the FS student and coach.

Improving Your Own Skills in Formation Skydiving and Teaching:

The responsibility to provide good quality coaching rests on you as an FS coach. We have seen above that there are many ways to ensure that you are providing the best formation coaching you are able to on any given day at the drop zone. However, possibly the single most important way you can improve your ability to be a coach is to improve your own skills. The level of motivation you have as an individual to be good at formation skydiving will be reflected in your motivation to apply good coaching techniques as described in this manual. Your student also needs to learn from your motivation in order to become motivated themselves to succeed. Ask yourself, “Is my student progressing?” If they are not, you may need to re-evaluate your methods. Ask yourself if you are fulfilling the objectives laid down in this manual. Improving your own skills give you the best opportunity to evaluate your methods.

Being regularly coached by another FS coach is invaluable. Taking the time to be briefed, demonstrate your ability and be debriefed on your skills and techniques has multiple benefits. Not only is it possible that you are given valuable input about how to improve your own technique, but you will also be able to pick up new ideas about how to coach the very same improvements.

Chapter 5: The Skydives

As previously mentioned, unlike the very structured style of the AFF or Category System course, FS progression is not easily based on a set of specific jumps, but on a series of different skills that must be demonstrated by a skydiver before the FS1 can be awarded. We've seen that these skills are detailed in the BPA Operations Manual, but how do we turn those skills into individual skydives?

This chapter is designed to give you an idea of some of the skydives that you may want to consider completing with you students, a clearer idea of what makes this progression something that is different for every skydiver, and should how they may need to be tailored to each individual.

Take another look at the BPA Operations Manual requirements:

“6.4. Formation Skydiving (FS)

6.4.1. To obtain Grade 1 in Formation Skydiving (FS1) the parachutist must, be introduced to FS by a CCI/Advanced Instructor nominated FS1 Grade parachutist or equivalent of proven FS instructional/coaching ability, have received a full safety brief and demonstrated the ability to:

- a) Control fall rate and turn in place.
- b) Dive and approach a target and achieve docking techniques.
- c) Break-off turn and track away to obtain clear airspace for deployment.
- d) Maintain good altitude awareness throughout the skydive.
- e) Control horizontal movement (forwards, backwards and sideways).
- f) Complete four points of 4-way FS.”

Whilst bearing in mind that these are the minimum requirements for FS1, in order to fulfil these requirements, the absolute bare minimum skills that need to be demonstrated in freefall are as follows:

Skill I:	Fast and Slow Fall
Skill II:	Forwards and backwards
Skill III:	Side-slides
Skill IV:	Grip taking
Skill V:	360 degree turns
Skill VI:	Swoop to pin
Skill VII:	4-way skydive

However, as it would be exceptional for a skydiver to be able to complete all of these skills a) on their first attempt and b) to a sufficient standard, it is unlikely that a skydiver's progression will look like this. You should only approach your CCI when you believe the skydiver you are coaching is safe to jump with others and that they at least understand the principles they need to follow on every jump to stay safe.

A more realistic progression may look a little bit more like this, in any order, with any number of repeats of each jump:

Skill I:	Body position
Skill II:	Fast and slow fall
Skill III:	90 & 180 degree turns
Skill IV:	360 degree turns
Skill V:	Side-slides
Skill VI:	Forwards and backwards
Skill VII:	Grip taking (multiple 2-way drill dives)
Skill VIII:	Dive and approach a target (aka. swoop to pin/dive to pin)
Skill IX:	Tracking
Skill X:	3-way skydive
Skill XI:	4-way skydive

Remember, each jump should be tailored to the individual, working on their skills as they develop. All of these examples may need to be repeated several times, until they have demonstrated the skills described in the BPA Operations Manual competently.

Consider a student that has spent a considerable amount of time learning some of the free-fall skills in the wind tunnel. Bear in mind that whilst they may need fewer skydives to demonstrate some of the skills, as coach, you need to see that they will be safe jumping with others. For instance, if they are unable to demonstrate skills such as good eye contact or more importantly altitude awareness or tracking; ensure that the FS progression jumps are continued until they do.

A couple of the jumps above involve demonstrating skills that are virtually impossible to practise in any wind tunnel but are arguably the most important skills needed for FS progression. Being able to dive and approach a target safely and successfully at the beginning of a formation skydive and being able to track away from it at the end before deploying your parachute are skills that are fundamental to both the student's safety and the safety of others. These skills may be practised alongside other skills during the progression, (e.g. unlinked exits and tracking off at the end of each jump) but there is great merit in using individual skydives to concentrate on these skills on their own. Both are great fun to practice and can easily be transformed into valuable FS skydives.

It can be seen from this chapter that the FS progression with regard to jump numbers is not an exact science and that it is your job as an FS coach to manage the expectation of your students and to tailor their progression appropriately.

It is not the intention of this manual to be exact about the individual skills required either. The reason for this is that there are many different techniques that can be used to achieve the same goal. Even some of the top FS jumpers in the world would teach you how to use your body position to perform, for example a 360 degree turn, using very different techniques. They all work, some equally well, but what is important is to make sure you understand the technique you are teaching, why you are teaching it and yet allow yourself some degree of flexibility to ensure you find the best technique for the individual skydivers that you are coaching. At the end of this manual, in Appendices A to G, the basic theory behind the moves and some basic techniques are detailed which are designed, not to be specific, but as guidelines to both student and coach.

It is recommended that you have a basic understanding of the theory discussed in these Appendices. Even if you choose to coach using slightly different techniques to those shown in the appendices, they should still evolve around the same principles.

Chapter 6: The FS1 Qualifying Skydive



The 4-Way Formation Qualifying Skydive

Successful 4-way formation skydiving requires the student to use the same priorities and basic discipline as 2-way FS, which are:

The Priorities of FS

1. Be on level – Fall rate issues, the biggest challenge in FS.
2. Be in your slot – Translate or rotate to get where you need to be, then stop.
3. Get a grip – Pick up grips
4. Continue to fly – There should be no tension on the grips when on them, you should be in a neutral position and when the grips are released you should be able to stay in place.

By this time, the student should have already demonstrated the discipline and skills necessary to do 4-way, so the FS1 qualifying skydive is essentially a confirmation of these skills and being able to bring them all together rather than learning a new one. The student may have already experienced a 3-way by this point, but will often find the most challenging aspect of this skydive is learning what it is like to be in the sky in close proximity to three other people. They should remember that they should treat the FS1 skydive as they would a 2-way, looking across the formation to the person opposite, using him/her as a reference to the fall rate and distance.

The FS1 qualification will be awarded by the CCI after reviewing the video of the skydive, and/or discussion with the coach. Whilst in accordance with the BPA Operations Manual, the MINIMUM requirement in order to be awarded the FS1, is to achieve a four point 4-way, the following guidance is offered to CCIs, FS coaches and students.

The number of “points” achievable is, in its most basic sense, proportional to the amount of free-fall time available on that skydive. i.e. if a skydiver is in free-fall for twice the amount of time, with the same ability level, they should be able to achieve twice the number of points. However, it is well known that other factors can affect the “score” of a skydive, such as the exit, conditions etc., and these factors should be taken into account by the CCI when considering awarding the FS1. The following guidance is based on an average day where FS1 candidate “A”, jumping from 10,000ft without a linked exit, is able to achieve four points. In order to demonstrate an equivalent level of skill to candidate “A”, the number of points that should reasonably be expected from any other candidate from a given altitude using a linked/unlinked exit is as follows:

Altitude	Min Points Expected Using Linked Exit	Min Points Expected Exit Not Linked
10,000ft	5	4
11,000ft	6	5
12,000ft	7	6
13,000ft	8	7
14,000ft	9	8
15,000ft	10	9

Fig. 1 Expected Points for FS1 Qualifying Skydive

The expected points above do not overwrite the requirements as described in 6.4.1 (f) of the BPA Operations Manual. However, they offer the CCI guidance when taking into account all factors on any given FS1 skydive, based on free fall altitude (and therefore, time) available. Coaches should have a good idea, based on the above table, of what is expected of their student before putting them forward for an FS1 qualifying skydive.

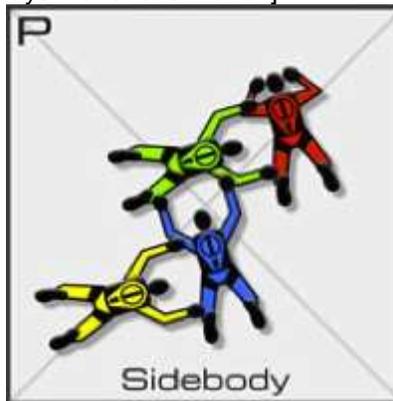
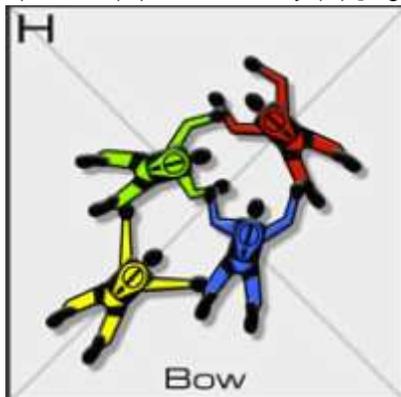
The FS1 Skydive

Part of completing a good FS skydive is how it is constructed and briefed. You, as coach, should know the skydive you are about to attempt well and be able to brief it confidently. The student may take an interest in how any or all of the slots are flown on the skydive, so be prepared to brief or fly any of the slots.

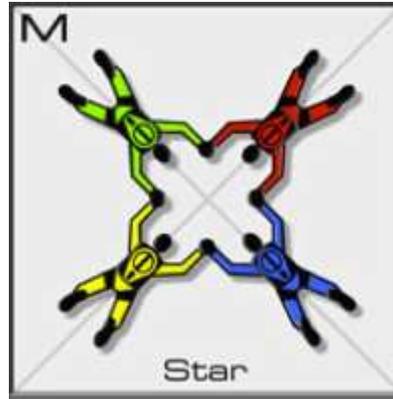
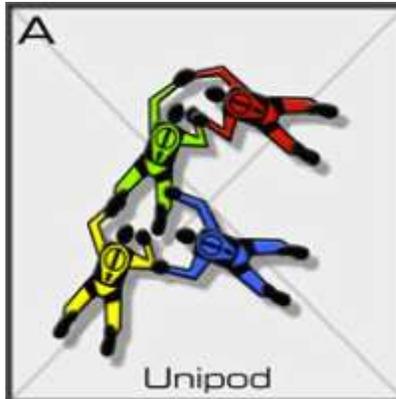
In most circumstances the student will take the position or “slot” of “Point” as this helps to facilitate the inclusion of an out-facing position in one of the randoms, which is a very important and tricky skill to master, but essential to include. Your student, however, may want to discuss other options with you, which should be considered accordingly.

Consider the diagrams below and over. The FS1 skydive should include one of each of the following four selections to make a four point 4-way.

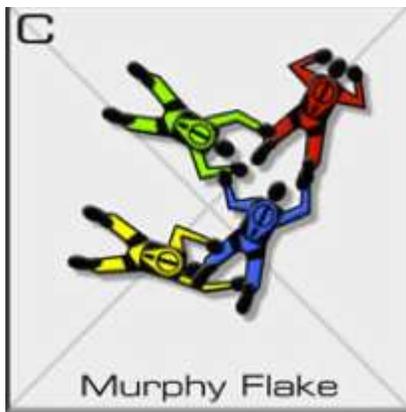
a) Bow (H) or Side-body (P) [e.g. side-ways move to formation]



b) Unipod (A) or Star (M) [e.g. face in and take two grips]



c) Murphy-flake (C) or Phalanx (Q) [e.g. outfacing with leg grip(s) taken]



d) Satellite (O) or Meeker (E) [e.g. round formation that includes grip taking and having grips taken on]

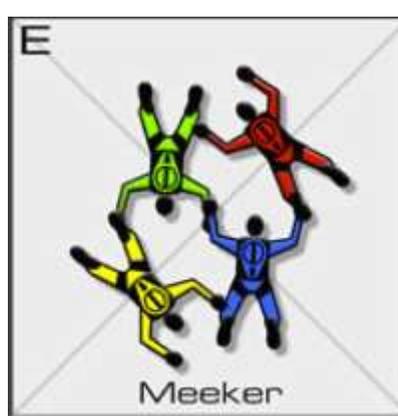


Fig.2 FS 1 Skydive Formation Choices

Preparation

The following elements of preparation are important for the student in order to ensure the 4-way skydive goes as planned:

Puzzle

Before you work out the puzzle of the sequence learn the sequence by the names of each formation. Say the names to yourself and repeat this sequence until you can easily remember it. Next relate each name to the name of the formation. Look at the pictures and learn the names of the formations. Once you know the names, look at your slot within that formation. On the FS1 skydive, if for instance, you will take the slot of "Point" you need to study the red jumper in the formation. Also study the red jumper's position relation to the others in the formation, in particular to the "Tail", who in this instance will be opposite you.

Once you have a mental image of where you need to be on each formation, you are half way to solving the puzzle.

The Dirt Dive: The dirt dive involves all four jumpers walking through the dive sequence. Simply walk through the dive in slow time just to build the familiarity with the formations and the grips you need to take or present. Establish eye contact with the skydiver opposite you when in each formation.

Angles

To work on the angles of each formation all four jumpers will lie on a creeper and go through the formations. Creeper work is the most realistic preparation for FS because you get a similar visual reference on the ground as you will in the air. As you go through each formation, cross-reference on the skydiver opposite and learn where you are in relation to him/her. As you move, continue to reference against the skydiver opposite as if it was a 2-way. When in the right place look at the grip you need to take, take the grip then look back at the skydiver opposite. THINK, MOVE, STOP, PICK UP GRIPS.

Keys

The key is the signal to move on to the next formation. The key comes from whoever is best suited to see that the formation is built and ready. In these dive sequences, the jumper flying the outside centre position is most likely to give all keys.

Exit

The exit is a very important part of the preparation. It gives the skydivers to work out their position in the aircraft door and how they are going to exit the aircraft in the formation, presented to the relative airflow. A mock-up of the aircraft door should be used, and the count practiced. This is a vital part of the skydive to get right, and should be learned and visualised along with the rest of the skydive.

Secret Stuff

The secret stuff is basically any top tips for a particular dive or team. The top tips on an FS1 qualifying dive are relax, cross reference, be on level, be in your slot, get a grip but don't chase it, continue to fly and most of all enjoy!

Appendix A: FS Skills Theory – The Neutral Body Position

In any discipline of skydiving, you must start from a position of balance. To be balanced is to be neutral or in a state of equilibrium. It is in this state that you can provide a good stable foundation from which to progress in any direction.

The neutral flying position is the starting and ending point to whatever you do in formation skydiving. Before you transition into making any move, you must be balanced, static and neutral.

To fully understand and master this skill, it helps to build a relationship with the air travelling around your body. Think of every inch of your body being an effective surface area. Use your sense of feel as your body cuts through the air, pushing the air out of the way as you travel through it. Maintain a relaxed neutral position and constant feel of air pressure on ALL FOUR LIMBS.

The following series of diagrams aim to give an idea of the body position you should be aiming for as a formation skydiver. The exact position to be adopted will vary for each individual, so follow the guidance of your coach, but bear in mind the following elements of theory involved in finding your own neutral position.

TORSO RELAXED AND STRAIGHT: The Torso is the catalyst to everything you do in freefall. As the torso is the centre of your body as a whole, it has a direct influence on how both the upper and lower limbs behave. Your torso is the key to your balance because it represents your whole body's centre of gravity. At the centre of your torso is your spine.

A good neutral position will require a very relaxed arch. The spine also needs to be straight and its worth knowing that no matter what move you make as you progress through your FS1, your torso should always remain straight as shown in Fig.1.

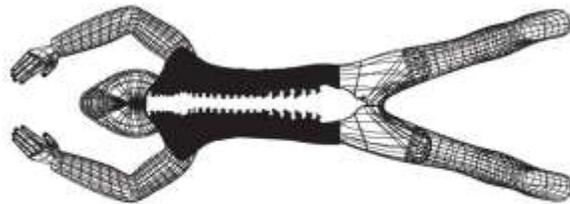


Fig. A.1



Fig. A.2

HEAD: Just think head up. If your torso is in a good position then your head will be too as it is an extension of the spine.

ARMS AND LEGS: To achieve a balanced neutral flying position you must understand that the human body is symmetrical in its structure. Pay particular attention to this fact, since the action of positioning your limbs when flying will create a reaction of either solid powerful moves or a series of inconsistent compensations. Maintain symmetry with your limbs and you will maintain balance.

The student positioning of the **arms** can be seen as a bad habit if you want to improve your flying position. Having a wide arm stance is great for stability - think of a bicycle with stabilisers. However, your arms need to be in a position of mobility i.e. in a grip taking position, as well as maintaining equal air pressure to that of the legs. Lying on the floor and propping your chin up on your fists as if watching the TV, then dropping your hands away from your chin, forwards, can gain a reasonably accurate approximation of the arm position to be aimed for.

Your elbows should be wider and lower than your shoulders as shown in Fig.3. It's common for your hands to be too close to the face. Think about creating more surface area as shown in Fig. 4 by extending the arms forwards.

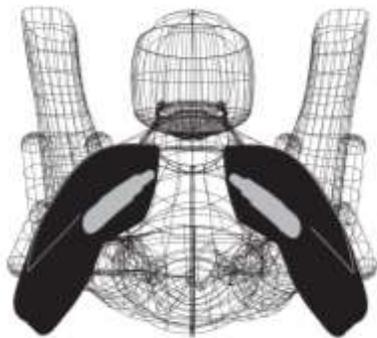


Fig. A.3

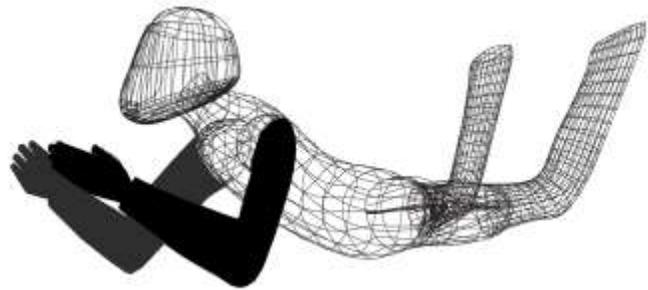


Fig. A.4

A common area for improvement for students and even experienced skydivers is in their **leg** position. As we know, being wide in a stance provides great stability. However legs being too wide can cause problems such as de-arching of the hips. Legs are also often too bent which reduces the overall effective surface area of the body in freefall. One of the reasons these problems arise is due to the fact that you rely on feeling for leg positioning as you can't see what they are actually doing and our sense of feel is often deceiving. Bear in mind that your legs, especially if in a bootie suit, are much bigger than your arms so they place a vital role in your position.

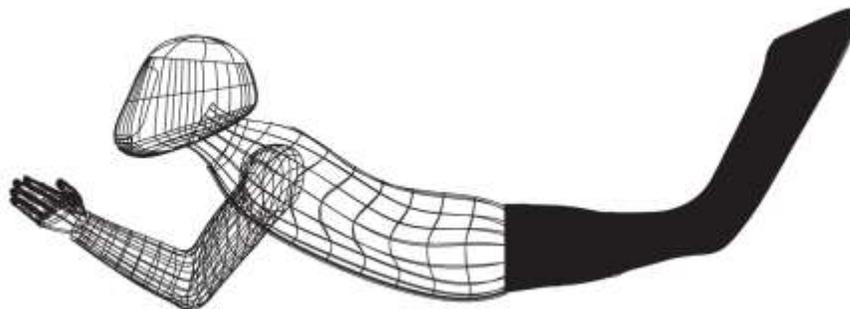


Fig A.5

A good visual reference to what your legs are doing is to look at your arms. If you are falling straight down (i.e. not back sliding) and you can see that your arms are close to your head then your legs are possibly tucked up or too bent. To find your neutral leg position stand over a mat with feet about shoulder width apart, then crouch down lean forward and lie on your front without parting your legs any further. Next consciously think point toes but not straight up but about 45 degree to the ground as shown in diagram fig. 5 & 6. Your toes are an extension of your legs.

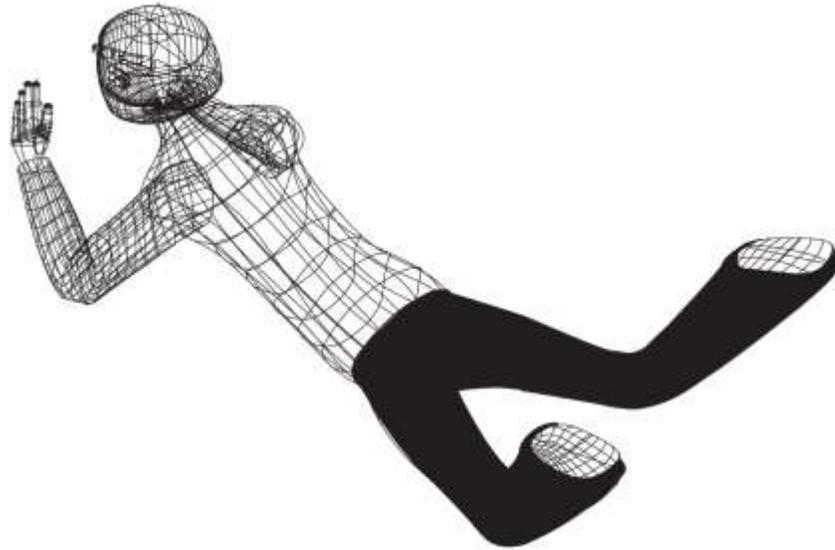


Fig. A.6

Appendix B: FS Skills Theory - Fall Rates

A World Champion in 4-Way FS once said: "Fall rate issues are the biggest challenge in formation skydiving"

In formation skydiving we are always changing our body position, which will affect our fall rates. This is a problem, which will always arise no matter who we jump with. Formation skydiving requires you to be on the same level as everybody else; learning how to control your fall rate is the No 1 priority after achieving a good neutral flying position.

After we exit an aircraft, we accelerate towards the earth until we reach terminal velocity. We all accelerate at the same rate regardless of our size or mass due to the effect of gravity alone, but because of air resistance our terminal velocities will vary.

Since formation skydiving is about falling relative to each other we must learn to change our fall rates. In preparation for jumping with someone of a differing weight to you, it might be worth considering the use of weight belt(s) to assist in averaging out the expected fall-rate. However if we need to adjust rates once we are in free fall, then all we can do is change the air resistance. The amount of air resistance depends on the amount of our surface area. The more surface area, the more air resistance, the less surface area, the less air resistance as shown in fig 9 and 10.

Fig. B.7 Slow Fall



Fig. B.8 Fast Fall



To increase fall rate several different changes in body-position can be made. Firstly, the very best attempt to arch from the hips and lift the head up must be made. Also, bringing the arms in towards the face or pointing the elbows down will reduce air resistance at the top half of the body. An equal reduction in air resistance must also be made at the lower body in order to remain in a neutral position. This can be achieved by tucking the feet up by bending the knees and/or squeezing the knees together.

The opposite moves are made to reduce our fall rate, whilst maintaining eye contact with the person or formation we are aiming to fall relative to. This is achieved not by looking directly up (as we have seen above that lifting the head increases fall rate) but by laying the head to one side and looking above from the side. So roll the shoulders, suck in the abdomen; straighten legs and arms, to create the largest, flat surface area possible for the slowest fall-rate you can achieve.

Appendix C: FS Skills Theory - Transitional and Rotational Moves

As we pointed out in Appendix A, all moves start from the neutral flying position. Before we make a move we should be in a position of balance. The resistance, which holds us in place, is this same force that we use to move. So as far as physical effort goes, the amount of input to create a move is at its greatest when starting and stopping. Whatever input we use to initiate a move, we have to use the same amount of input to stop it.

It's better to translate to close distance to a target before making the rotation. Backwards movement is used in formation skydiving but usually as a fix to a problem. If you need to present your leg grips to another skydiver then it should be as part of a turn in place. Flying backwards and not being able to see what's behind us is far less efficient and more technically difficult to do accurately than maintaining eye contact with the formation and making the turn close in.

Rotational moves are normally quicker because our centre point isn't moving when we turn in place. When you initiate a move, before you stop it there is a period when you go back into a neutral position. So we begin in a neutral position, we initiate a move, we go back to neutral, we stop the move with an opposite position then we resume a neutral position.

The pictures below give an idea of the body positions your coach may suggest you use to perform each move. However the specifics of each move are not an exact science and the way your coach describes each move will be formulated in a way that works for you before you attempt them in the air.



Fig. C.9 Forwards movement



Fig. C.10 Backwards movement



Fig. C.11 Left Turn



Fig. C.12 Side-slide to Right

Appendix D: FS Skills Theory - Grip Taking

If ever there is a need to be in a neutral position before making a move, it is when taking grips. One of the many advantages of the neutral position over the conventional student position is that it's a good grip taking position.

There has always been the tendency to backslide away from the grips you are trying to take, and the more you reach, the more you backslide. The reason is obvious, as you know how to backslide deliberately. When your arms are pushed out in front of you they create lift, which in turn will push you back. Basically, taking grips involves arms and legs but the amount is subtle and is more closely related to being in a neutral position than any other move.

If formation skydiving is all about scoring points then it is because the grips are taken to complete a formation in order to score. But understand that grip taking is last in the list of priorities.

The priorities of FS:

1. Be on Level: Fall rate issues, the biggest challenge in formation skydiving.
2. Be in your slot: Translate or rotate to get where you need to be, then stop.
3. Get a grip: Pick up grips
4. Continue to fly: There should be no tension on the grips. When on grips you should be in a neutral position and when the grip is released you should be able to stay in position.

Appendix E: FS Skills Theory -Tracking



With the ever-increasing performance of canopies the need for horizontal separation on deployment must also be ever increasing. To increase horizontal separation before deployment, we need to improve our ability to track.

You have already demonstrated the ability to track, if you hadn't you would still have student status. However, this is one of the skills we are unable to practise in the wind tunnel and often by this stage, you have only spent about the last five seconds of every skydive performing it. All skydiving skills require time to practise and time to get the feel for a new skill but so far tracking is the last thing we do. When the formation skydiving part has stopped, remember the tracking is still a vital part of the skydive.

Tracking is a life saving skill and should be taken seriously as a result. It is the move we learn here for you to know how to achieve distance from others in your formation before deploying your parachute. The longer (in time) that you are able to maintain the tracking position before reaching your deployment altitude, the further you will be from other members of your formation. To achieve this, we need to gain as much lift as possible. When tracking the angle of attack and the shape of your body are the two factors that influence the amount of lift we aim to achieve.

Lift increases as the **angle of attack** increases right up until the stall point. The angle of attack is the angle that the object meets the relative air. Relative air is relative to the direction you are travelling in.



The higher than angle of attack, the higher the amount of lift, and the lower the angle of attack, the less lift. The following figures show the two extremes and it should be obvious that the better position for gaining distance from a formation is shown in figure E.14.

Fig. E.13 Low Angle of Attack



Fig. E.14 High Angle of Attack

We also mentioned **body position** as a factor in achieving a good track. We do everything we can with our torso to achieve lift by rolling the shoulders, sucking in the abdomen.

Mastering a good track position requires a good understanding of what you are trying to achieve and having a well rehearsed routine and checklist.

When learning to track, an example of a routine we can use is known as the seven-stage track. When learning it, it will take approximately seven seconds to get into the optimum tracking position before deployment and it is not recommended to attempt the seven-stage method if you intend to start if below a height of 5000ft. However, it can be practised on a tracking dive initially, and then used as the method at the end of each skydive for separation once proficient.

The Seven-stage Track

1. **Slow Fall and Turn**
Since the idea is to create as much lift and air pressure as possible, start to build up air pressure by adopting a slower fall rate position as you turn 180 degrees into your clear air space. De-arch! (Even consider stretching arms out forwards as per your slow fall position to assist in creating lift)
2. **Legs**
When you are facing your clear airspace extend your legs fully for maximum air deflection, legs straight, point toes, press shins on the relative air.
3. **Arms**
As you start to move, sweep back your arms to either side of your torso in a slow and controlled way. Palms of hands down.
4. **Look Left and Right**
When tracking into clear airspace maintain observation, look for other trackers and - even worse – canopies.
5. **Look Above and Below**
As above.
6. **Flare**
When flaring, go back into slow fall position for maximum air deflection and drag.
7. **Pull**
Provided you tracked off at 5000ft and had no problems during the track, you should now be at about 3500ft.

We have already mentioned that tracking is a survival skill. The aim of the FS1 progression is to teach you the skills necessary to perform 4-way formation skydiving and as the very nature of formation skydiving is to be able to skydive in bigger groups, the need to be able to track off into clear airspace becomes more apparent. If the skydive all goes to plan and enough time is allowed between groups on exit and at break off everyone turns 180 degrees away from the centre of a formation then finding a clear airspace is easy. However things don't always go to plan and the ability to be able to change your heading, as an avoidance manoeuvre whilst tracking is vital.

Whilst tracking, the most effective way to change your heading is to use your head. Your heading comes from being symmetrical and the keystone to this symmetry is the head. The head acts like a rudder but at the front instead of the back. If you are heading towards an unexpected obstacle, look at clear airspace and point your nose in the direction you want to go.

Appendix F: FS Skills Theory - Dive to and Approach a Target/Swoop to Pin

To dive and approach a target or to “swoop to pin” would normally be performed if you were part of a large formation load and were one of the last to leave the aircraft. Being the last to leave the aircraft creates a few problems to the skydiver and so requires lots of practice to get it right which is why it is usually left to the most skilful or experienced skydivers on the load.

If you are inexperienced in big ways then it is advisable to be as close to the door as possible on exit however if you want to challenge yourself, and have more fun, the try getting further back in the line up.

The first challenge you have when leaving the aircraft, some time after the formation is the distance between you and whoever has already left. The distance is both vertical and horizontal and you should close the vertical distance as much possible before closing the horizontal although the last few hundred feet can be a combination of the two.

The second challenge when swooping down to a formation is eye contact. We rely heavily on what we see in FS as a visual reference to where we are in relation to others but when swooping we may lose sight of who is below us in order to maintain a vertical dive approach. Because we can't rely on visual feedback we need to rely on timing and anticipation, which obviously improves with practice. However, if you do lose sight of anyone below, it is better to stop and locate the other skydiver(s) and then continue. Also, a top tip is that it is ALWAYS better to recover out of a swoop too early and be high on the formation than to be too late and go low on a formation.

It is vital to be proficient at this skill for your safety and enjoyment in formation skydiving. Too fast approaching the formation and you are putting yourself and others on your formation at risk of collision and possible injury, too slow and you may not make it to the formation at all.

Reducing the vertical distance is the first priority and to do this we have to use the vertical dive or the no lift dive position as shown in F.15.



Fig. F.15

The vertical dive position is also known as a no lift dive position because it creates minimum lift as it has a very low angle of attack in relation to the relative air. Obviously, this is the quickest way to lose vertical distance due to minimum air resistance. To transition into this position we start from a dive exit then swoop back the arms and extend the legs as if you were tracking. Try to maintain visual contact with your formation at all times – if possible.

The “Stadium” Approach. How much time you spend in the vertical dive position whilst reducing vertical distance depends on how long you wait before leaving the aircraft after the target but remember it is better to be too early than too late. By maintaining eye contact with your coach or formation as you reduce the vertical separation your head will naturally lift, which assists in you transition from the vertical dive to a “flatter” position. As your angle of attack changes it produces more air pressure on the underside of your body, slowing your rate of descent.

Be aware that you are now travelling at a much higher speed than you have experienced before. To reduce speed quickly from this position we can use the body flare. Judging when to flare requires anticipation and its best to err on the side of caution and aim to be early.

Ideally you will be 100ft above your target and to close the remaining distance use a combination of fast fall and forward movement. A good approach would be at a 45-degree angle down towards your target but aim to set up on level and 10ft out. Close remaining distance on level, stop, and pick up grips. If you transition too early and still have a few hundred feet to go, then you can transition back into a vertical dive for a few seconds before flaring out again.

If you imagine the seats in a football stadium, steep at the top, shallow near the pitch, it should give you a good idea of the shape of the swoop we are trying to achieve. It is ideal to practise this skill at least twice, but at least as many times as required until safe and proficient.

Appendix G: FS Skills Theory - Exits

The exit is the starting point to a skydive and it's important to get off to a good start in order not to use up valuable time having to regroup as a formation.

To be successful on exit, the whole formation (whatever its size) should be on the same geometric plane, and flying without undue tension or rotation. To achieve this the group needs the following 3 things:

1. Timing
2. Presentation
3. Placement

Timing

Timing refers to how synchronous all jumpers are during the exit. It would be ideal for all jumpers to hit the air at the same time however this is difficult from an aircraft with a door on the side of the fuselage. The precise time for individual jumpers to exit depends on their slot in the formation but whatever your slot, all jumpers work off the same timing known as the pulse or count. The "count" as it is often known can differ significantly between coaches/teams. Some will use an "Out/In/Out" count, some a shake, followed by an "Up/Down/Out", some even use the traditional "Ready/Set/Go". You have to know what count is going to be used so that the timing of the exit is known. This timing needs to be consistent and well rehearsed on the ground.

Presentation

Presentation refers to an individual's attitude in relation to the relative air. To be able to have good presentation individual jumpers need to present their flying surface (the under surface of their body) onto the air. As a group, a formation should avoid being too flat as this can cause a formation to fold itself. So it's better to be steep.

Placement

Placement refers to an individual's slot within a formation. Your placement is the foundation to your timing and presentation. When you exit an aircraft in a formation, you need to know where to place your body in relation to others jumpers.

As you progress through the FS1 system, your coach will vary the type of 2-way exits you use. This will develop your awareness for different jobs on exit. When you are going for your FS1 qualifying dive you will exit as part of a 4-way formation and having an overall awareness for different jobs on exit will aid your success on the launch.

Every formation exit is different and to describe the technique used for each one in detail here would be impossible. The following pages give some examples of some of the different exit positions and techniques you may experience for both 2 and 4-way exits and the technique involved.

Example 2-Way Exits

On a 2-way exit, each jumper will have a different job. This is because each jumper will have a different slot in the door and each slot has a different name. The most commonly known slots are:

- Front Float (F.F.)
- Centre Float (C.F.)
- Rear Float (R.F.)
- Inside Diver (I.D.)

Front Float

Front Float is one of three 'floaters' exit positions. The front float exit position is used when both jumpers decide to exit from a position in the door, which is outside the aircraft. The other jumper would be in the centre float position in the centre of the door

Position in the door

Climb out and assume a position as far forward in the door as possible. Hold the bar/rail with both hands and get balanced with your centre of mass over your right foot. Get presented by trailing your left leg. If you are launching a linked exit, the centre float will take your right arm grip with his left hand. When you are ready, look at the C.F. and watch for the count.

On exit

As the count comes, move with the C.F. but, as your placement on exit is higher in relation to the C.F. be aware of the power required to place yourself correctly above them. As you exit, maintain presentation and keep eye contact.



Fig G.16

Centre Float

The centre float exit position can be used with the other jumper either inside or outside of the aircraft. The job of the centre float is one of controlling the exit and this slot would normally initiate the count.

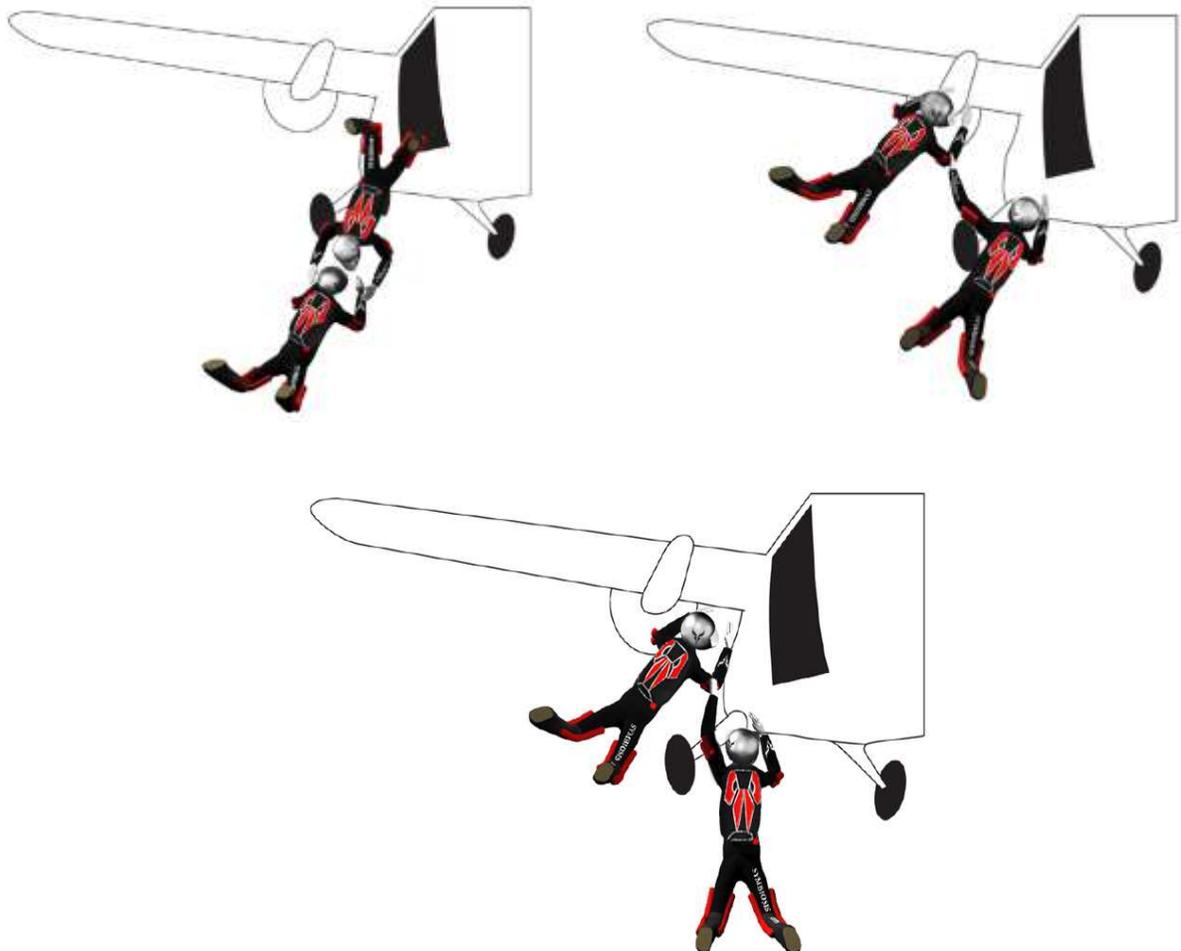
Position in the door

Climb out and assume a position in the centre of the door. Hold the bar/rail with both hands and get balanced with your centre of mass over your right foot. Get presented by trailing your left leg. If you are launching a 2-way linked exit with a front float, take the front floater's right arm grip with your left hand. Other exits may require the other jumpers to take up grips on you.

On exit

If you are giving the count, ensure that the other jumper is ready and get eye contact. As you exit, push off with your right foot and get your hips away from the door. Think presentation and maintain eye contact.

Fig. G.17



Rear Float

The rear float exit position is used when both jumpers decide to exit from a position in the door, which is outside the aircraft. On a 2-way, the other jumper would be in the centre float position in the centre of the door.

Position in the door

Climb out and assume a position at the rear of the door and wait for the centre float to get into position. Once the C.F. is in position take their right arm grip then, for practice, hang down as low as possible with your right arm fully extended. Trail your left leg and get presented.

On exit

Look up at the C.F. and watch for the count. As the count comes move with the C.F. but as your job on exit is to be lower than C.F. think about exiting slightly earlier than C.F. Also, as your placement should be lower than the C.F. on exit, all you have to do is release your hold of the bar rail and drop straight down. Think presentation and maintain eye contact.



Fig. G.18

Inside Diver

The Inside Diver position can be used when the other jumper is in the centre float position in the door.

Position in the door

Wait for the centre float to climb out and get into position in the door. Take the C.F. arm grips and position yourself as you briefed on the ground. Take time to get your position correct and think about which leg you are going to use to power out of the aircraft with to aid presentation. Get presented by lifting your right elbow and lowering your left. Stand with your left foot forward and feel balanced. You have the luxury of space in this slot so use it. Be near the door to help you exit, but don't crowd the C.F. by leaning out on them. When you are ready, look at the C.F. and watch for the count.

On Exit

As the count comes, move with the C.F. and leave with them. Use power in your exit to go with the C.F. rather than expecting them to "pull" you out of the plane. To aid in your presentation lead with your left foot and maintain eye contact.



Fig. G.19

4-Way Exits

On a 4-way exit each jumper will have a different job. This is because each jumper will have different slots in the door. The four slots are commonly known as:

Point	Inside Centre (I.C.)
Outside Centre (O.C.)	Tail

Point

The Point's job on exit is to be high on the formation in relation to the other jumpers. Point flyers use different techniques to achieve this on different formations – your coach will guide you.

Position in the door

As point you may often feel like you have no room in the door especially with smaller aircraft. Pick up grips, be high in the door and get presented yet balanced. If necessary ask other jumpers to give you more room near the door to allow you to find your balance.

On the launch

Watch the count come from the centre and move with it, trust that space will appear as the formation leaves the door but don't wait to be pulled out of the aircraft. Your placement depends on the formation but you should be the highest jumper in relation to the rest of your group. You should always attempt to look across the formation towards the tail.

Outside Centre

The Outside Centre's (O.C.) job on exit is one of responsibility and control due to their position in relation to the other jumpers on exit. The Outside Centre usually gives the count so they should know when the formation is ready to launch.

Position in the door

When getting into position aim to have your right foot in the centre of the door with your centre of mass directly above your right foot. Get balanced then take up grips or present them depending on the formation. Try to be presented to the relative air without sacrificing your balance.

On the launch

If you are giving the count don't rush it, give the other jumpers the chance to read it. Your placement depends on the formation but you should think about getting your hips away and out from the door to give space to the inside centre. As you launch look across at Inside Centre.

Inside Centre

The Inside Centre's (I.C.) job on exit is to leave with the Outside Centre and in a position between Point and Tail.

Position in the door

You will usually be the last to take up a position and take grips. As the inside jumper, it's usually easier to get balanced. Pick up grips and look to the Outside Centre.

On the launch

Get eye contact with O.C. in the door and maintain this on the exit. Watch the count and move with the outside centre leaving at the same time. To avoid tension on the grips think about getting your hips through the door. Your placement depends on the formation being launched but you should be level with Outside Centre.

Tail

The Tail's job on exit is to be the lowest jumper in the formation in relation to those you are jumping with. In order to achieve this the Tail needs to leave the aircraft ever so slightly earlier than the Outside Centre.

Position in the door

When getting into position, firstly get balanced to the rear of the door than present or pick up the grip depending on the formation. Lastly try to lower yourself in relation to the Outside Centre but if you have a grip on him or if he has a grip on you, be sure not to pull him down with you. Once you are in position look for the pulse or count.

On the launch

Whatever count is used, move with it, whether it is up down out, or out in out, just be in time with the count but remember to be slightly early when the formation hits the air. With this slot, anticipation is THE top tip and by getting low in the door you will give yourself a head start. Your placement depends on the formation but whatever it is you should be looking up at the formation trying to make eye contact with Point as soon as possible.

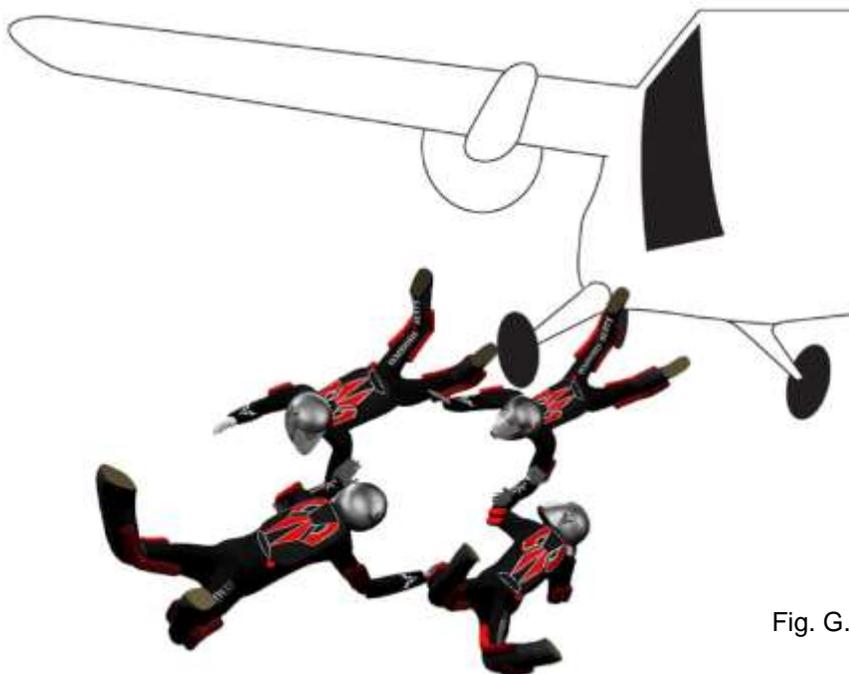


Fig. G.20