Manual for Swinging Trapeze and Cloud Swing

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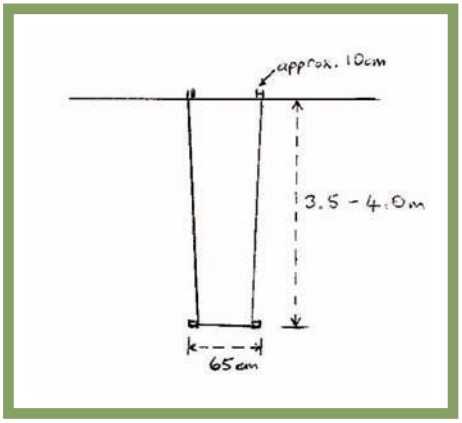
Part1/ Swinging Trapeze

1/ TECHNICAL SPECIFICATIONS AND SAFETY

Length and weight of bar	The bar is usually 65cm long and can weigh anything from 6 – 7kg depending on personal preference. It is weighted at the ends
Length of ropes	This is partly down to personal preference and partly to restrictions of space and height, obviously the longer the ropes the more space is needed for the swing. Typical lengths are from 3.5m to 4m
Width of fixings	Once again this down to personal preference but normally the ropes are fixed around 10cm wider than the bar on each side. Obviously this will also depend on the length of the ropes.
Top Fixing	It is possible to swing with normal 'D' ring fixings, but it is much better to have properly constructed bearings to make a smoother swing



Part1/ Swinging Trapeze

Safety

Swinging trapeze is obviously a potentially dangerous activity which is why it is important for teachers and students alike to understand and practice the correct safety protocols.

Before talking about systems of lunging it is important that teachers understand that skills should be learned in progressive stages. On the swinging trapeze this usually means that basic skills are begun on the static trapeze. For reasons of fear the beginner should start on a low trapeze and there should always be safety mats underneath. Once skills are mastered and consolidated on the static trapeze they can be moved to a swinging trapeze, but with a small swing. When learning the basic swing the student should not aim to swing as high as possible but to achieve the correct technique. In this way they will not only be safer but will learn correctly with a view to more advanced skills. This is a sound way of learning because it builds upon success at each level and the consolidation of correct technique. If things go wrong then the student can be returned to an easier sub-skill which they can achieve. This can be reinforced until ready to advance once again.

Lunging

Lunging is very important for aerial activities especially for trapeze and cloudswing. Any amount of mats underneath will not really help because things will normally go wrong at the end of a swing and momentum is more likely to take the student through the window than directly downwards.

There are many methods of lunging and as many opinions to the best ways. Generally when a student is learning, especially at the beginning, it is best to connect them to two ropes. These are generally connected to the grid where the trapeze is fastened, outside the fixings for the trapeze. If the fixings are too close it can lead to the student getting caught up in the ropes. We can clearly see this type of lunge in Fig 1 below.

Fig 1
Double lunging system showing both ropes outside the line of the trapeze.

Part1/ Swinging Trapeze

Later on a single line lunge can be used. This is generally the type of lunge used in performance. The line can either be tied off and static, or manned. When using this type of lunging with a performance level student, the belt can be loose enough for the body to twist inside it. However, please note that this is for experienced students only.

In some schools a system of double attachment is used on a single line, so that, if one carabina comes off the student is still attached to the lunge. This can be seen in figs 2 and 3. The lunge is usually fixed off to a floor plate and then controlled by a teacher or somebody experienced in lunging technique to avoid excessive slack in the rope and the possibility of entanglement. This system can be seen in Figs 4 and 5.

Fig 2
Showing double carabina 'failsafe' lunging system

Fig 3
Same system as Fig 3 in place around the waist

Part1/ Swinging Trapeze

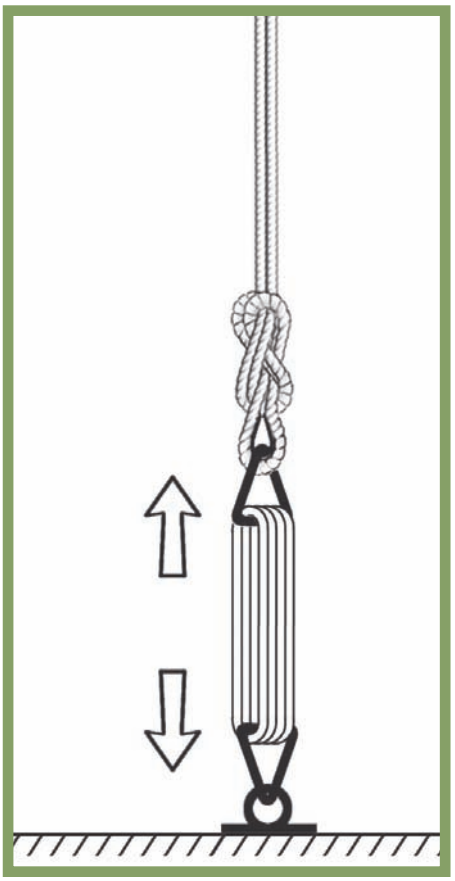


Fig 4
Lunge rope is attached to the free carabina so if the operator lets go of the rope the student is still safe

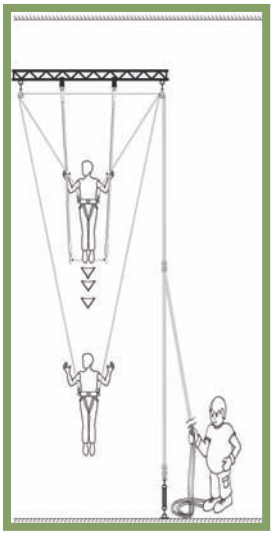


Fig 5
Fixed rope system in use, the person lunging takes up the slack in the rope, but if anything goes wrong the rope is still attached to the floor.

Part1/ Swinging Trapeze

2/ BASIC SKILLS ON SWINGING TRAPEZE

Positions

Sit

The basic sit position should be at about 45° to the ropes and the body straight. The trapeze is placed at the top of the legs just below the cheeks of the bottom. The arms are straight and relaxed and the shoulders are also relaxed and down.

Pike hang

In this position the legs should be horizontal and the knees just by the arms directly under the trapeze. The head is in and the body is folded as much as possible.

Hocks hang

The legs are folded around the bar using the muscles in the back of the thighs to keep pressure on the bar and consequently keeping the student on the trapeze. Toes are extended and he body is kept straight with the head in line and looking slightly up.

Ankle hang

Once again the body is kept in alignment and completely straight. The legs are pressed outwards against the ropes and the feet pressed inwards, with the ankles flexed. The arms are extended downwards in line with the body.

The Four Positions for Swinging (In stand)

1 2 3 4

Part1/ Swinging Trapeze

Position 1: (Straight)
The ankles are extended and the student stands on the balls of her feet, the elbows are turned out and the ropes are gripped at around eye level allowing the upper arms to be horizontal

Position 2: (Plie)
The knees bend to just below 90° the arms should be straight and the ankles flexed. The back should be upright and the hips stay in line with the ropes

Position 3: (Push phase)
The body leans back in order to push the trapeze into the swing. It is important not to change the straight position of the body, the hips must not drop back. In this position the student has extended the ankles again.

Position 4: (Recuperation)
Once again the legs bend and the chest is pushed forward in front of the ropes. The arms will be as straight as possible depending upon the flexibility of the students shoulders. The hips stay in line with the ropes again.

Throughout all these positions the head stays still and in line with the body. It is important to train the body to these positions so that the actions are natural before starting to swing.

3/ THE DEVELOPMENT OF THE BASIC SWING

The following chapter is translated from the notes of Gerard Fasoli, teacher at the Centre National des Arts du Cirque (Châlons-en-Champagne) presenting at the EPE module in Circus Space, London.

General Definitions:

The technique described here applies to work on the swinging trapeze with the bar suspended on ropes at least 3.8m in length. It is based on the principle of action/reaction and consequently of the alignment of the hang position and the support position in relation to the bar and the ropes.

It is a graduated method of learning, an educational base which doesn't lead to any dead ends and allows complete understanding and analysis of the movements and sensations. It upholds the teaching principle that at any moment you can expect to respond to the questions of your student.

The Essence of Swinging Trapeze
In the language of circus, it is common to hear that a performer 'pulls' the trapeze. Indeed, the force developed by the upper limbs is considerable and not proportional to the effect gained. It is better to use the term 'push' when applied to the trapeze. This type of work principally involves the quadriceps, the gluteal muscles and the chest.

Learning method
The principle of action and reaction as well as body alignment (with the eventual offset of the weight) either in support or in hang. This principle is basic to the method. Try not to be too didactic in your teaching and don't give more than three instructions at the same time. It needs, in effect, to be developed in small steps because it is too difficult to understand everything and put it into practice when first setting out.

The first lessons will be laborious, because the student will have problems with feeling, with understanding and putting into practice the things asked of him. You shouldn't be too strict about the basic principles or be too didactical. You should give a little latitude and correct mistakes one at a time without drowning them in technical information. Perfection on the trapeze will not be achieved within a few months. It will take years of work and constant supervision. The quality of the skills depends upon it.

Part1/ Swinging Trapeze

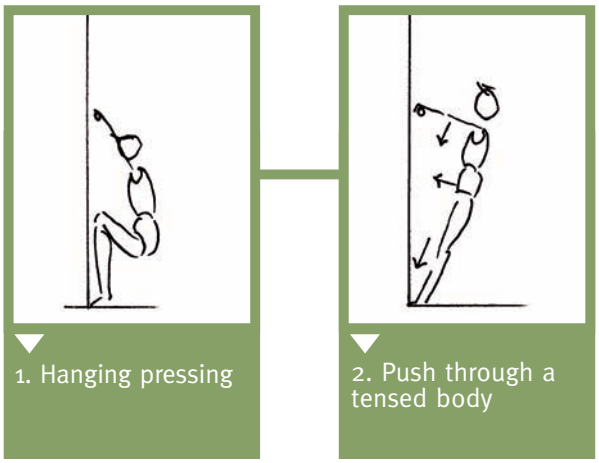
It is essential that the student understands the technical mechanism of learning, he or she will make the most progress if they understand why things work and why they don't.

Drills on the wall - bars

The principle technique requires going from the plie into the push. This allows us to work the trapeze.

- The combined feeling of hanging and pushin
- The amplitude and direction of the push
- The placement of the body
- The quality of movement

Search for a feeling of pressure from the shoulders whilst simultaneously pushing with the legs

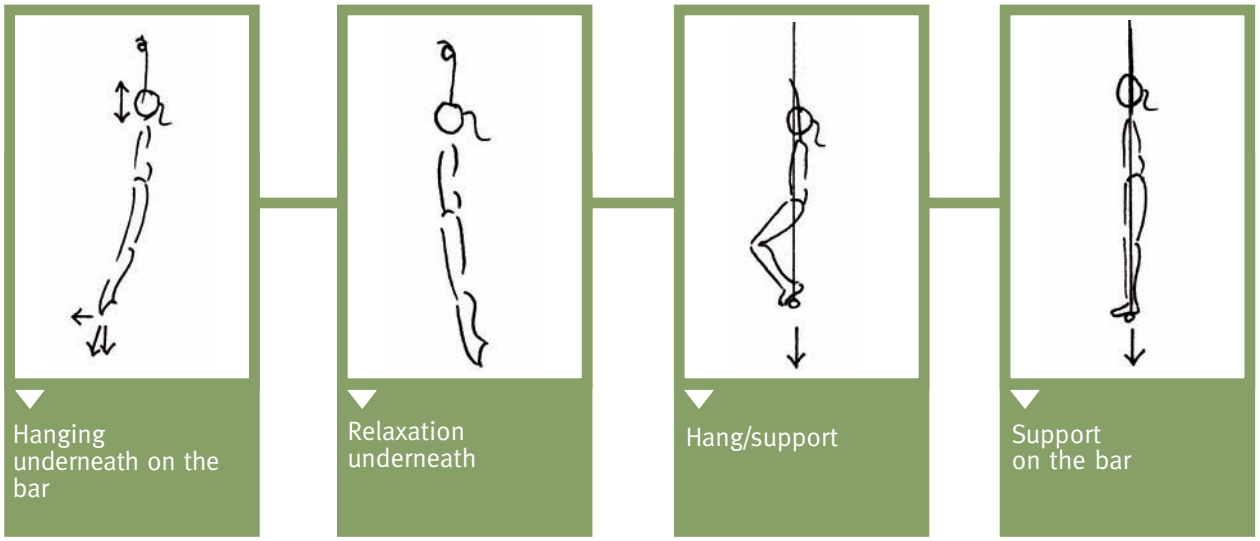


1. Hanging pressing

2. Push through a tensed body

Learning Stages on Static Trapeze

Positions of reference for support and hang. These are about the feeling of total support on the trapeze bar when standing, and a feeling of hanging directly below the bar. This work is essential for the technical development as well as the development of the relation with the apparatus.



Hanging underneath on the bar

Relaxation underneath

Hang/support

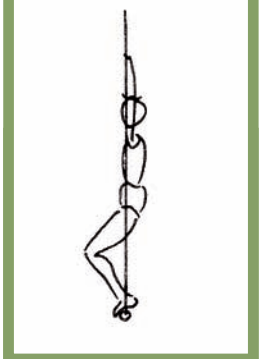
Support on the bar

Part1/ Swinging Trapeze

Plié on static trapeze

The first drill is done on the static trapeze to develop a good feeling fro the bar and the ropes, the simultaneous feeling of supporting and hanging.

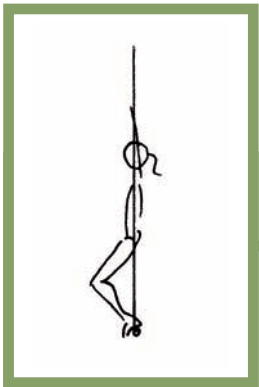
The hands are placed at the height of the ears, maybe a little higher or lower depending on how the student prefers to have the arms. Getting a harmonious flexion allows an effective push (ref: biomechanics). The arms are tight and the trunk is line with the ropes



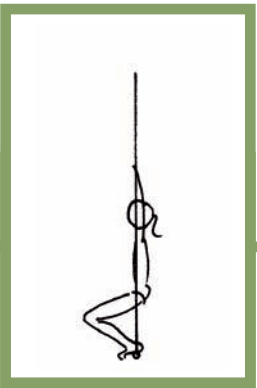
Plie on static trapeze

Main Faults

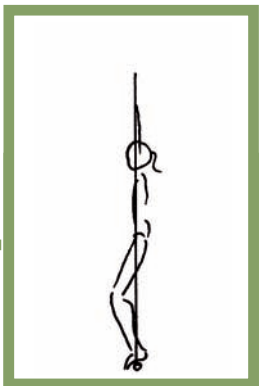
Faults in positioning of the hands during the plié



Correct hand height
Correct flexion



Hands too low
Excessive flexion



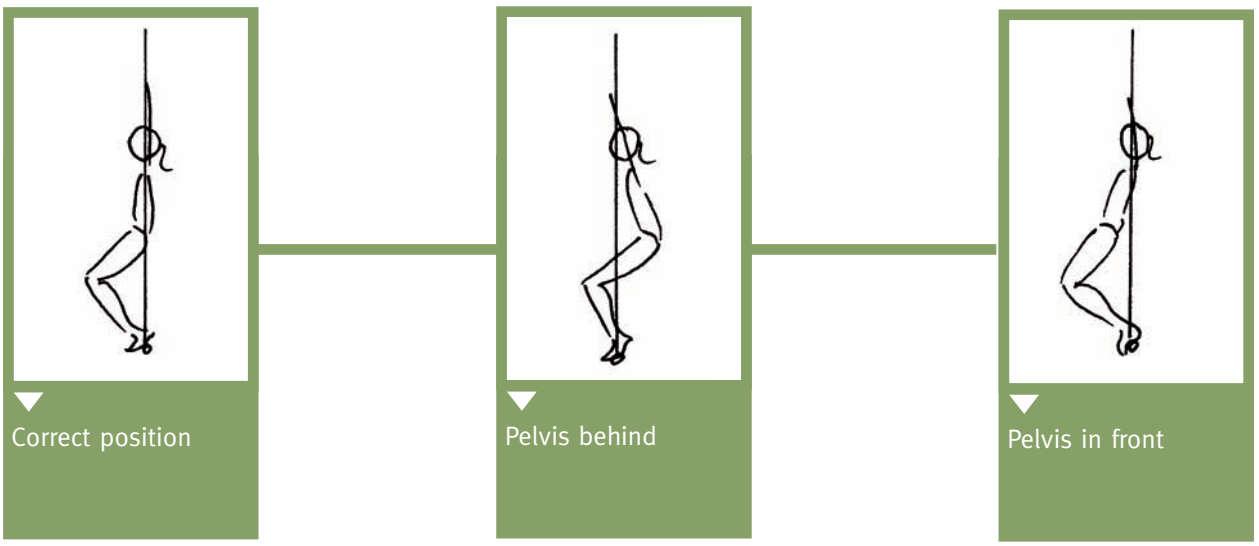
Hands too high
Insufficient flexion

Because the body is aligned with the ropes, the amount of flexion in the legs depends upon the height of the grip. Generally, this is around the height of the ears, however there are small variations in the relationship of the trunk to the limbs so each individual is slightly different.

Faults in alignment

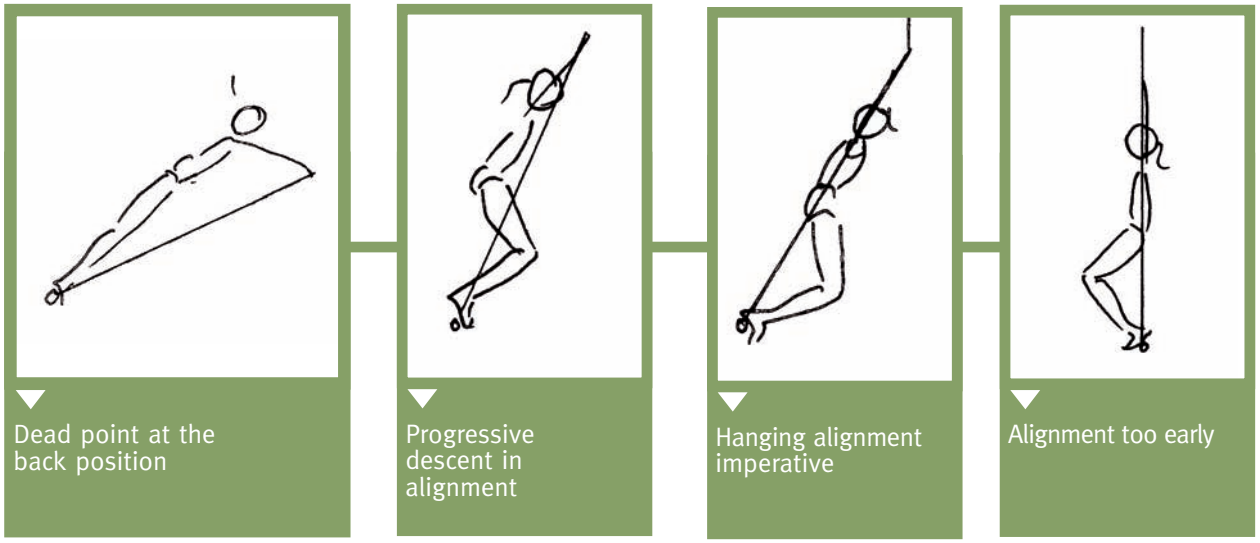
You often see a student staying behind the ropes. In contrast, when the hips move forwards it is a sign of too much relaxation in the back and shoulders. To correct the hips being too far back and the alignment of the hang at the same time, it seems the best way is to push the knees forward. Having the hands too low means that the body will be too far back during the plie.

Part1/ Swinging Trapeze



Progression of the plie during the swing

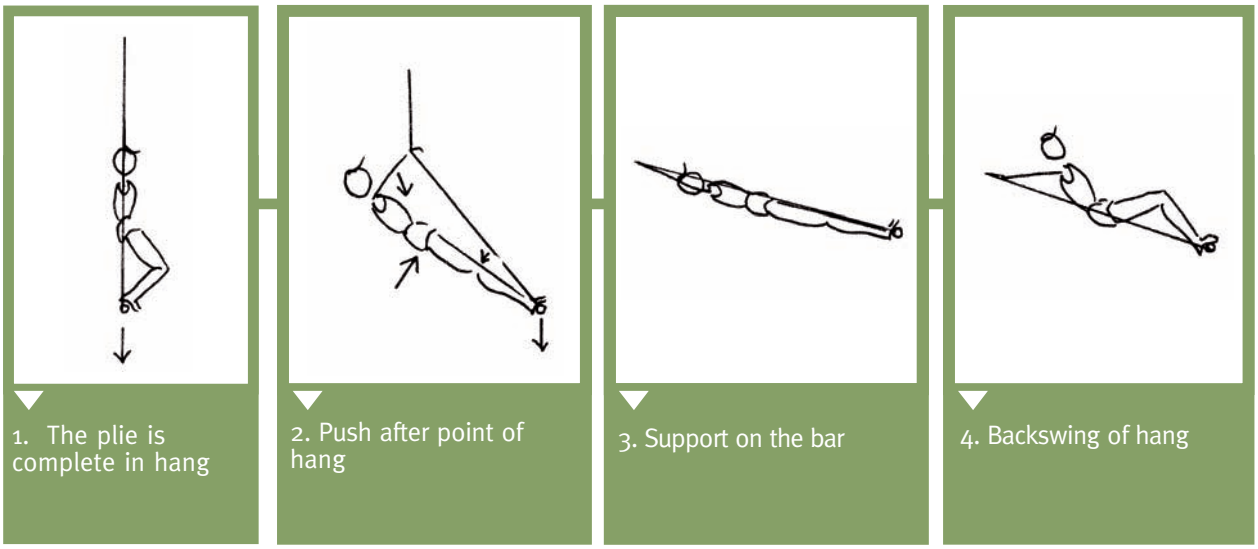
The plie on the downswing forwards must be progressive so as not to load the ropes at the front causing an angle to created in them.



The Push

Placement of the body during the push. The hands stay in the same position on the ropes, the arms remain under tension. You must get a double extension – thighs/trunk and thighs/legs, with a closing of the shoulders (retro-pulsion). There is a strong tension in the body throughout this action.

Part1/ Swinging Trapeze



1. The plie is complete in hang

2. Push after point of hang

3. Support on the bar

4. Backswing of hang

Realisation

It is the only real dynamic moment that you see throughout the swing. The support requires and intensive effort of the quads combined with a placement of the shoulder blades to the back. This should be combined with a perfect tension of the abdominals The push of the swing to the front s summarised by:

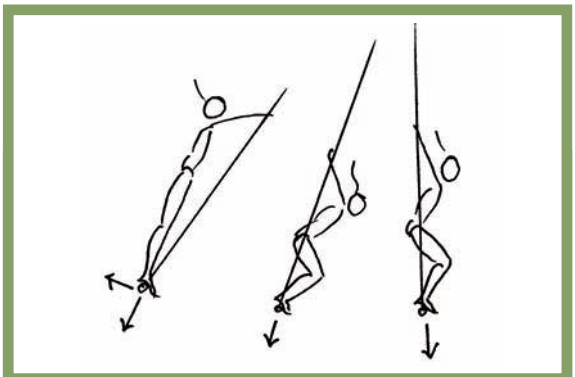
- Its intensity
- Its direction
- Its timing

Faults

- Pushing too late
- Forcing the height

The Backswing

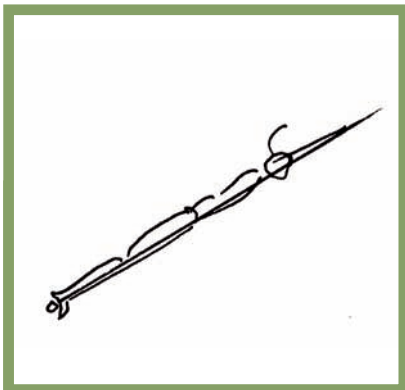
The push on the back swing must not happen too early, because it must create the correct projection of the body to the back in anticipation of leaving the bar. It is important to introduce the notion what is the ultimate aim of the push.



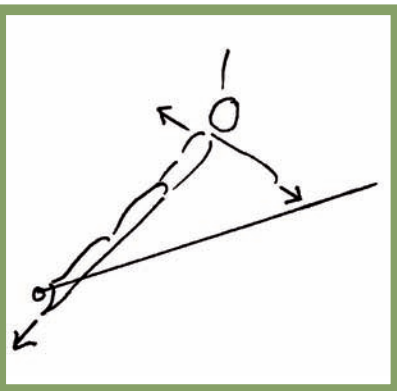
Keeping the weight in front during the push to the back

Part1/ Swinging Trapeze

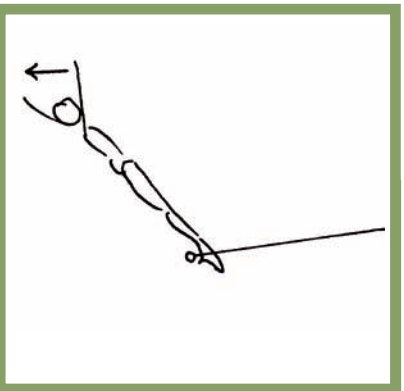
Depart to hocks and ankles



At the end of the push the trapeze continues to climb



Point of backward rotation Push the ropes back, slide inside giving the placement and the movement of the body throughout the descent with the trapeze

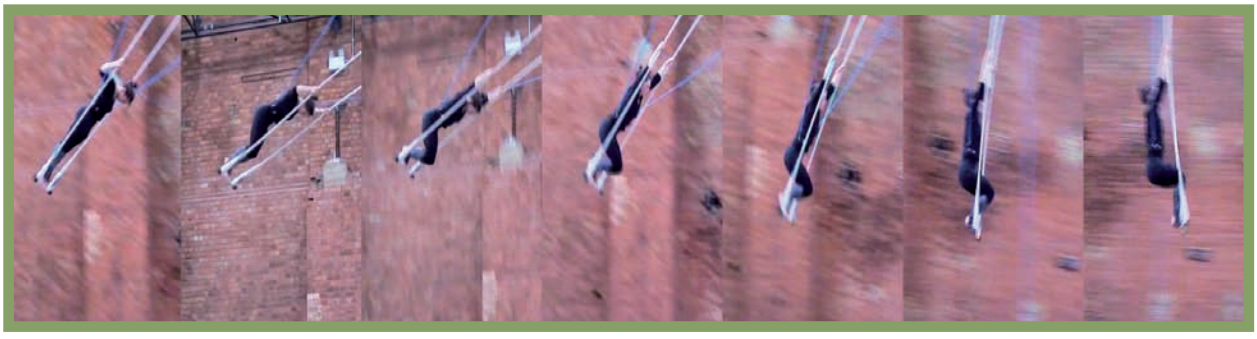


Dead point, placement of the arms

4/ THE BASIC SWING

The following sequential pictures show the swing development. The position of the ropes in the first picture is around 40º or less, in the last picture the swing has developed to around 60º.

The development of the plie in the down swing



1 2 3 4 5 6 7

The push phase

8 9 10 11

Part1/ Swinging Trapeze

The back swing (recuperation)

12 13 14 15 16 17

1 - The start position for the swing with the hands at ear height the body in alignment with the ropes and ankles extended

2 – 3 The beginning of the plie, at this point the hips are behind the ropes and move forwards as the swing progresses into 3. The arms are straightening to allow the flexion in the legs.

4 – 5 The legs are in complete plie just below 90º, the body has been moved in line with the ropes ready for:

6 - 7 The hang/support phase at the bottom of the swing in 6, getting ready for the acceleration of the feet into the push phase

8 The hips are now dropped back as the feet push through. This position the push is in full speed the arms are tight and the shoulder-blades should be pulled together.

9 The swing is now reaching the end of the push phase, the body is straight and hanging behind the ropes with strong arms and shoulders. The ropes are angled creating a shorter distance from the axis of the swing and therefore a smaller angle of momentum

10 – 11 The push phase has ended and the body is being pulled through the ropes in anticipation of the backward swing

12 At the dead point of the front swing the body is pulled in line with the ropes to the normal stand position during the transition to the back swing phase

13 – 14 On the downswing backwards the upper body is pulled through the ropes as the knees are flexed

15 At this point the body is brought back in line with the ropes to begin the push to the back. This starts, as during the forward swing, after vertical

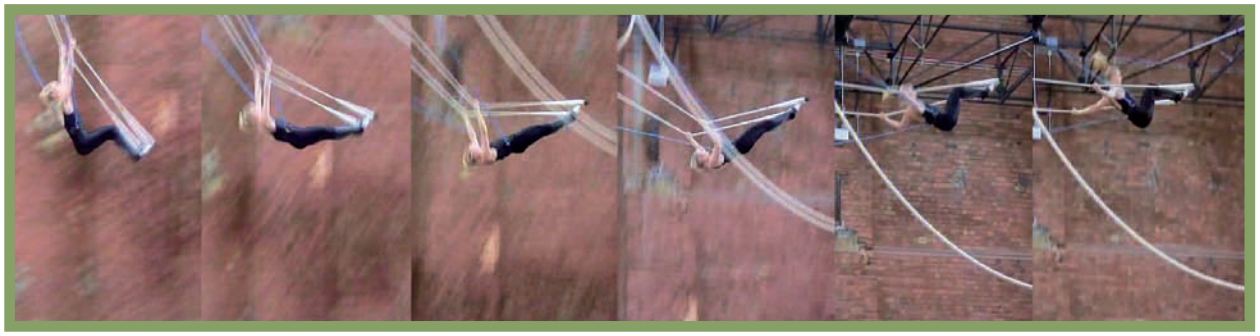
16 The legs are straightening and pushing the trapeze towards the higher dead point at the back of the swing

17 The dead point has been reached and the performer is preparing to swing forwards again

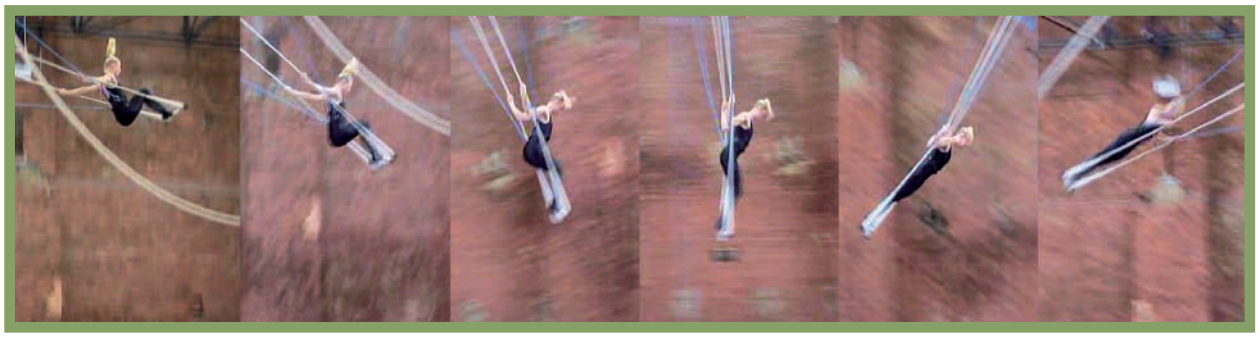
Part1/ Swinging Trapeze

Swing 2

1 2 3 4 5 6 7 8



9 10 11 12 13 14



15 16 17 18 19 20

NB It is very important to learn to control the swing before going for 180°

Part1/ Swinging Trapeze

5/ BASIC SKILLS

Going to sit at the back

On static trapeze:

From stand position on bar slide the hands down the ropes as the feet are placed just in front of the bar. The back of the legs slides down the bar at the same time as the hands slide down the ropes, ending in a correct sit position with the arms and body straight. This preparation can be used for both front and back sitting

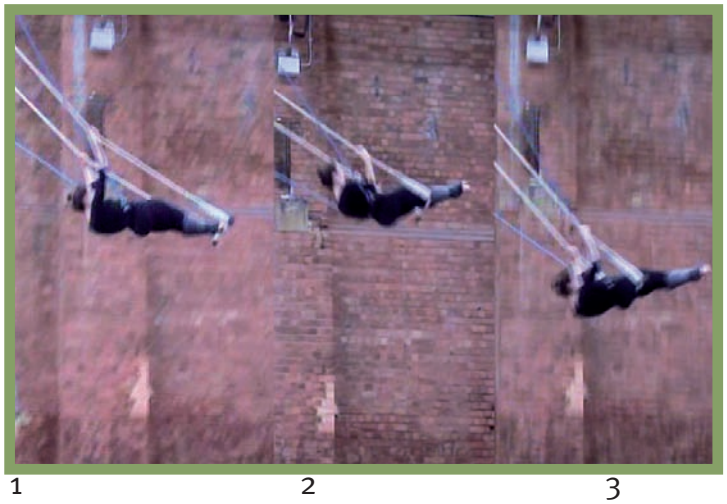
This skill is then transferred to the swing. Start with a small swing and build up on all these skills.

1 2 3

Once the swing is built up, this movement happens at the dead point of the back swing in preparation for the forward swing.

Part1/ Swinging Trapeze

Stand to sit on the front swing:



1 2 3

The sitting action is an extension of the push of the legs to the front of the swing and, as at the back, begins at the dead point of the swing. The technique is the same as for the back swing except the body is at a different angle.

From sit to pike hang (pop off or bascule)

1 2 3 4 5

Degagé

1 2 3 4 5

Part1/ Swinging Trapeze

Engagé

1 2 3 4 5 6

Jump to hang from stand (at back)

1 2 3 4 5

Drop to hang at front

1 2 3 4 5

Prise en fer (Back upraise)

1 2 3 4 5

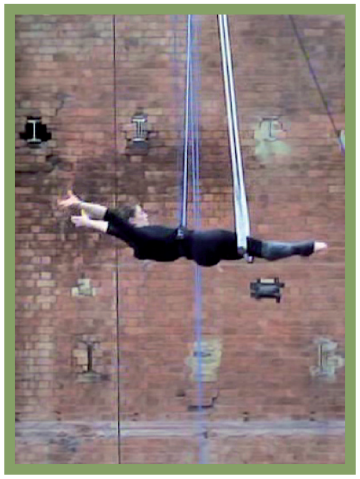
6 7 8 9 10

This skill shows a distinct beating technique, as will be seen in the returns to sit and stand from hocks and ankles later on. The chest and shoulders are pushed through from the forward swing at 1 – 3. As the swing starts to return the position is maintained for a time (4) and then the reaction happens which is a fairly deep pike at the bottom of the swing (5). The reaction to this is a beat backwards taking the body upwards on the back swing (6). This is combined with a pressing action on the bar and and a further reaction (7), the body begins to rise vertically and the shoulders are pressed above the bar (7 – 9). As the trapeze begins to swing forwards again the hips are brought into support on the bar (10).

Part1/ Swinging Trapeze

Drop to ankles

First Stages(On static trapeze)



The student starts in sit position and leans back extending the arms above the head. The teacher should lower the lunge until the body is horizontal. At this point the students body should be completely straight and under tension as pictured below.

From this position the student can be lowered to ankle hang slowly to feel the correct positions. After this is established then the drop is done on static trapeze.

1 2 3 4 5

- The position of the body should not change, it remains straight and in tension all the time
- The legs should not split too early

Part1/ Swinging Trapeze

Ankle beat return to sit

1 2 3 4

From a large beat in ankle hang the body is swung upwards, as the shoulders rise above the bar the body is straightened, the arms are taken above the head and the hips slide forwards. The body then comes into sit on the bar in a straight position

At this point the student needs to start learning some of these skills on the swing.

Sit to hocks (at back)

1 2 3 4 5

The student releases the ropes and begins to lean back approaching the dead point of the back swing. By the time the high point is reached the body is extended offering the greatest potential for momentum.

Sit to ankles at the back

1 2 3 4 5

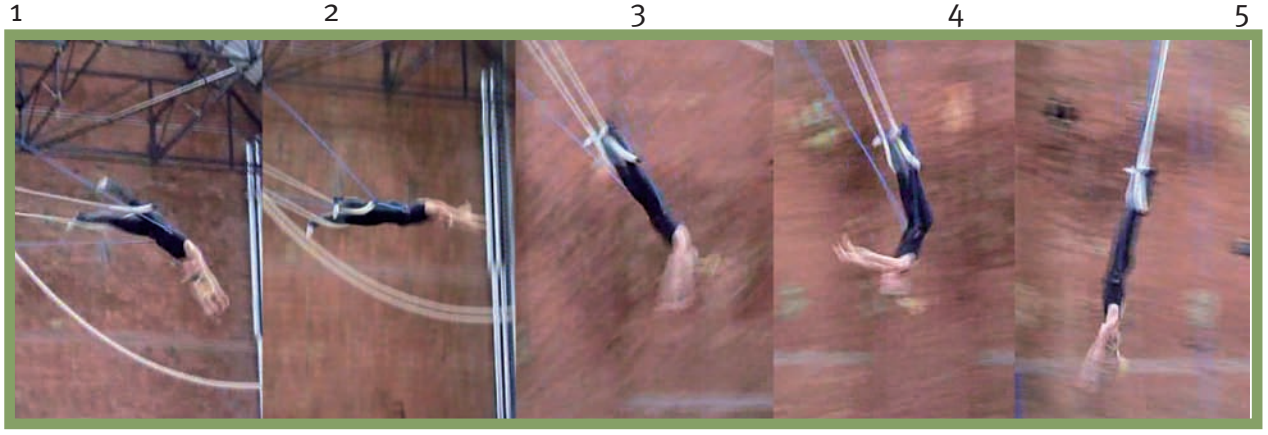
The timing for this is the same as to hocks, just before the dead point is reached so that

Part1/ Swinging Trapeze

the maximum extension is reached at the highest point of the swing. The body is kept in tension throughout.

Sit to ankles at front (return to sit)

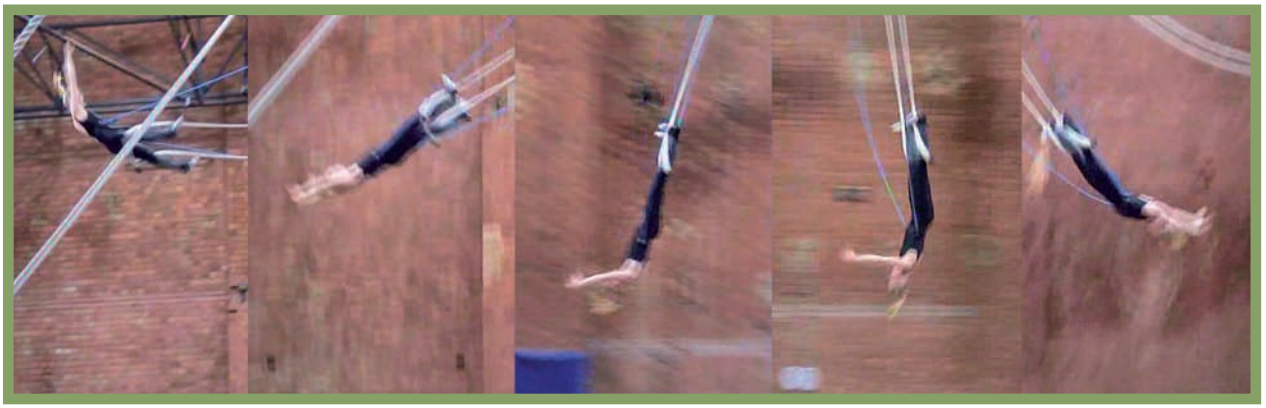
1 2 3 4 5



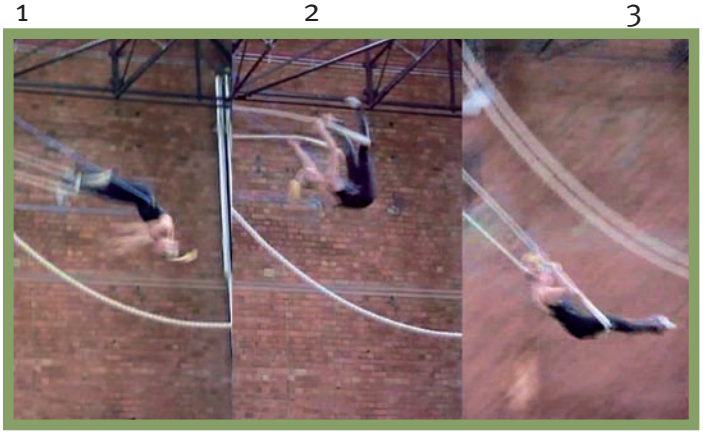
6 7 8 9 10

11 12 13 14 15

Sit to ankles at back return to sit at front



1 2 3 4 5



6 7 8

Stand to hocks at back

This can first be done from a small swing to train the correct technique and gain confidence. The arms and feet should go at the same time. At this point the teacher is taking most of the weight on the lunge.

1 2 3 4 5 6

Part1/ Swinging Trapeze

1 2 3 4 5

Stand to hocks at front return to sit at back

1 2 3 4 5

6 7 8 9 10

As with all these beats the action of dishing should not happen before the swing is vertical at the bottom. (see 6 above). The following arch is held to store up momentum for the reaction to take the body over the bar at the back of the swing as the dead point is reached.

Part1/ Swinging Trapeze

Stand to ankles at back

Once again this should first be done from a small swing under control of the lunge to train the correct technique and positions.

1 2 3 4 5 6

The body must be in tension throughout this technique, and the head is in line throughout. The student attempts to get the bar just behind the thighs directly below the hips so that she can slide into the ankle hang position.

From stand to ankles and back to sit at front

1 2 3 4 5

6 7 8 9 10

Part1/ Swinging Trapeze

11 12 13 14 15

16 17 18

Feet to ankles at front

1 2 3 4 5

Hocks beat to stand

1 2 3 4 5

Part1/ Swinging Trapeze

6 7 8 9 10

11 12 13 14 15

Ankles beat to stand

1 2 3 4 5

6 7 8 9 10

Part1/ Swinging Trapeze

The technique of the beat:

The beat technique in hocks and ankles has been developed by Viktor Fomine working in Montreal at the ENC. The specific difference is the position of the body at the front of the beat. Instead of the usual arch ready for the swing forwards at the bottom of the swing the performer must dish by lifting the chest. This also causes pressure on the ropes as the only way the student can get this tension is from the ropes. The result of this is a stronger beat as the tension is kept on the ropes and the beat action occurs later.

The basic practice for this technique on static trapeze is shown below:

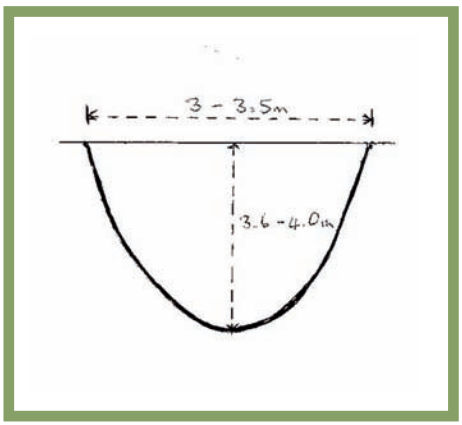
The swing looks normal until at 3 the chest begins to lift culminating in a straight position at 4 with a very noticeable bend in the ropes below the feet.

1 2 3 4 5

Part2/ Cloud Swing

1/ Technical specifications

Width of fixings	This is usually between 3 and 3.5m depending upon personal choice
Length of Rope	Depending on space, personal choice and so on, this is usually around 8.5m.
Depth of Drop	Once again dependent on personal choice but usually between 3.6 and 4m. If the drop is too deep then it can cause problems in standing on the rope because it will 'squeeze' the feet too much



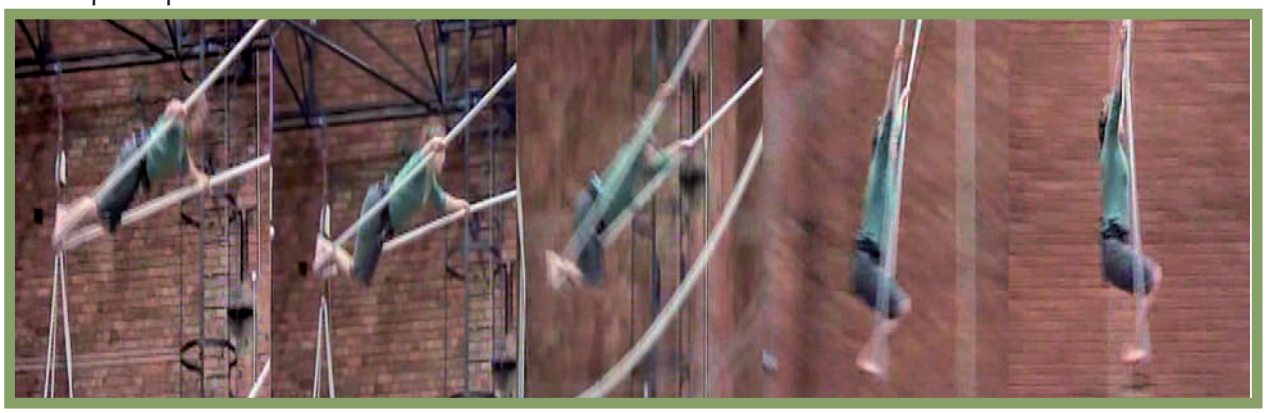
Some schools are beginning to use a wire core in the rope to get a little more stability

While the basic swing and many of the skills on Cloudswing are very similar to trapeze, the nature of the equipment is different. The trapeze is solid and weighted, the cloudswing is neither. Students who have done a fair bit of swinging trapeze may find the transition to the rope quite difficult. Cloudswing also requires more strength in the arms to pull from crucifix back to sit and so on.

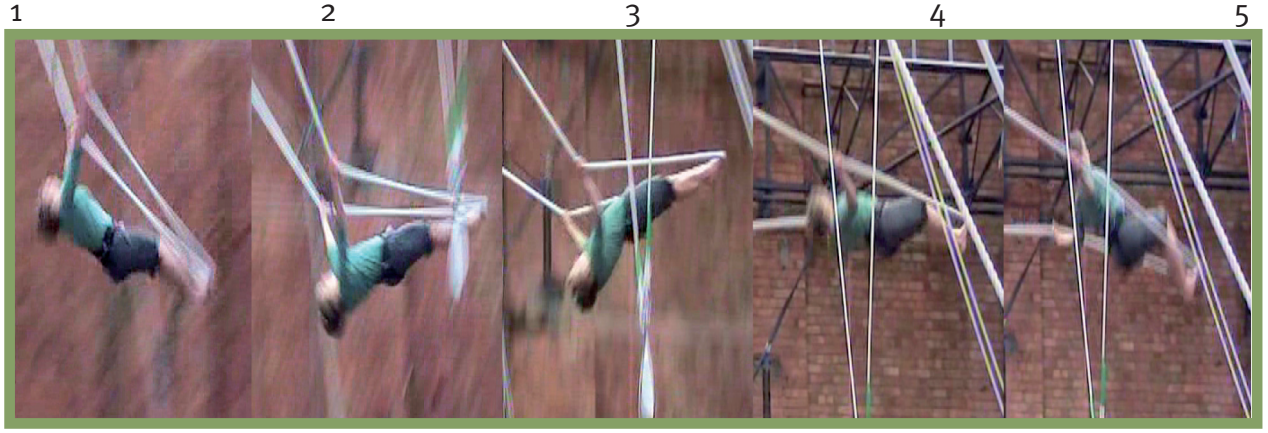
Part2/ Cloud Swing

2/ The Basic swing

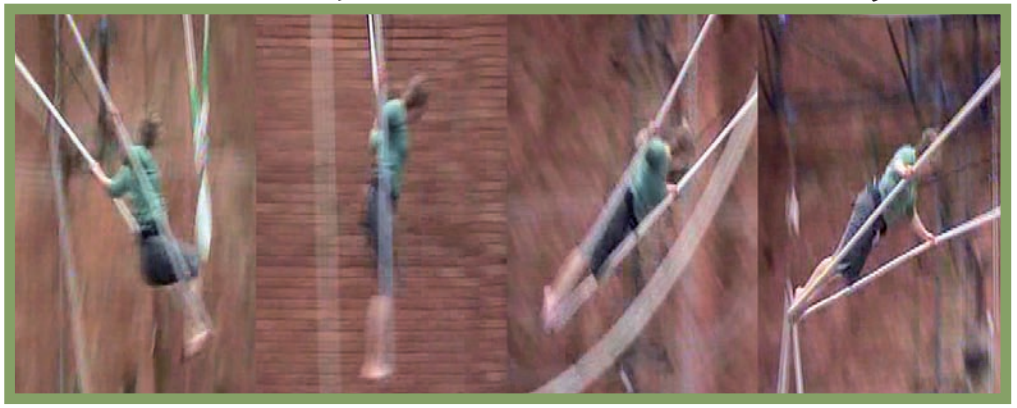
The swing on the rope is very similar to the swing on the trapeze and follows the same basic principles.



1 2 3 4 5



6 7 8 9 10



11 12 13 14

- 1 - 3 Shows the development of the plie on the down swing
- 4 - 5 The 'hang and support' phase at the bottom of the swing prior to the leg extension and push
- 6 - 8 The push through and extension, the body is held behind the rope
- 9 - 10 At the dead point in the front swing the body is brought through the rope and the legs bend in anticipation of the push phase through the back swing
- 11 - 14 The legs are extended from the position at the bottom of the rope and the body is brought back in line with the rope

Part2/ Cloud Swing

3/ Basic Skills

Sit on back swing

This takes place at the dead point of the back swing, the weight is taken off the feet by using the arms on the rope and the body is extended.

1 2 3 4 5

As you can see from the position of the rope during the sitting process, the whole thing is performed during the dead point at the swing at the back. The sitting position is similar also to trapeze and the body should be straight and at an angle of around 45º.

From sit, drop to hocks, beat and return to sit

The first picture shows the position where the student moves from sit to place the backs of the knees against the rope. The actual drop to hocks doesn't happen until the back of the swing as in picture 2.

1 2 3 4 5

6 7 8 9 10

Part2/ Cloud Swing

11 12 13 14 15

Sit on front swing, drop to hocks at back

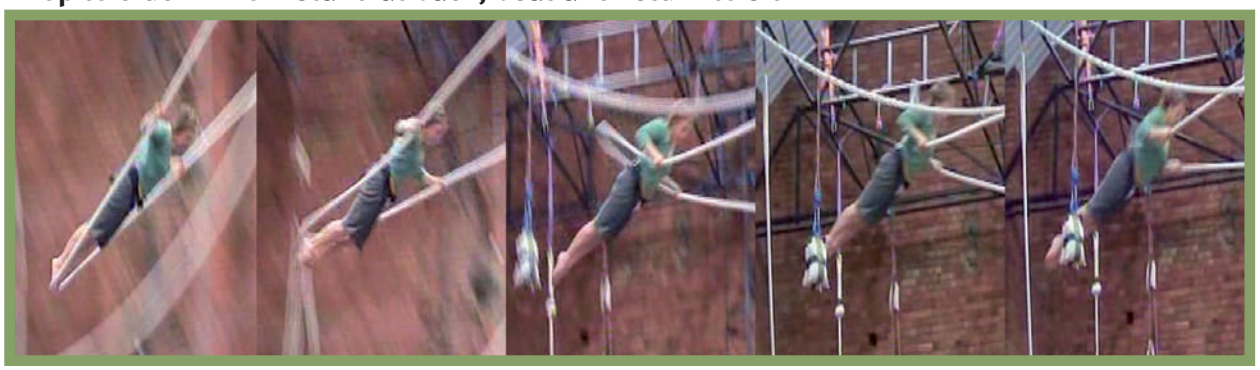
1 2 3 4 5

6 7 8 9 10

This skill is more advanced than the previous sit as the student is going to hocks hang directly from sit without the intermediate position with the backs of her legs on the rope. The sit at the front is a natural extension of the push but the student must be careful to keep a good strong body line in the sit position on the swing back. The hands are released just before the dead point so that the body can stretch out into the hang position with the chest concaved ready for the beat underneath the rope.

Part2/ Cloud Swing

Drop to crucifix from stand at back, beat and return to sit



1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

1 - 5 Once again the drop takes place approaching the dead point at the back of the swing. The feet are taken off the rope and the elbows turned out ready to slide into the crucifix position

6 - 8 As the swing approaches the front dead point the hips are pressed through creating an arch in preparation for the beat on the way back

9 - 11 As a reaction to the arch at the front of the swing the body makes a deep pike through the bottom of the swing

12 - 13 From the pike there is another reaction which causes a sharp arch in the body. It is important that this does not happen before the vertical position at the bottom of the swing. There is then a further reaction at 13 into dish

13 - 15 when the final reaction happens at 13 the body should be moving directly upwards, the student then presses the rope downwards and comes back to sit.

Part2/ Cloud Swing

Drop to crucifix at front, return to sit at front

1 2 3 4 5

6 7 8 9 10

11 12 13

Here the student drops to crucifix approaching the dead point at the front of the swing and once again the beat action demonstrated from 7 - 10 creates an upward movement of the body allowing her to return to sit at the front of the swing.

Part2/ Cloud Swing

From crucifix, stand at back

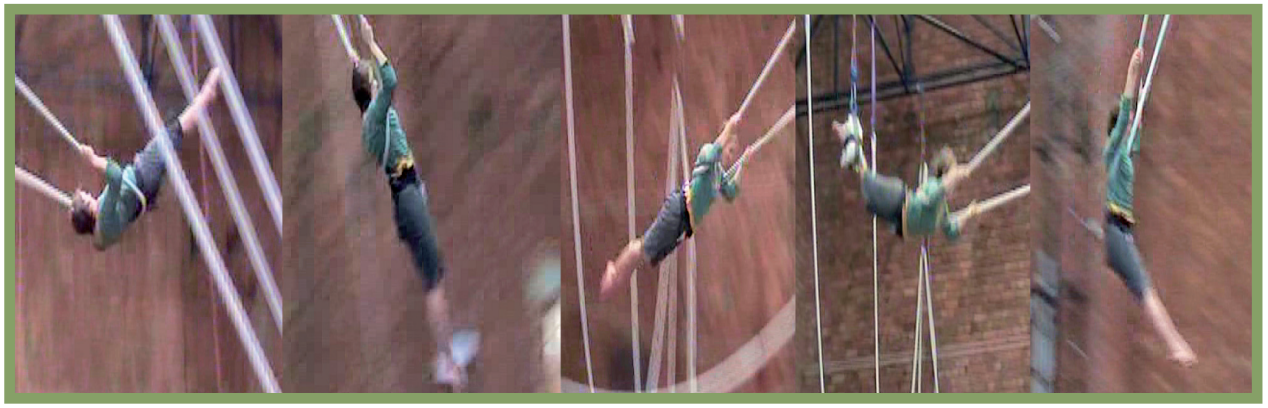
1 2 3 4 5

6 7 8 9

This skill requires a very powerful beat, as shown in 1 - 5 the student then presses down hard, straightens the arms and lifts the shoulders and hips to stand on the rope. It is difficult to put two feet on at the same time because of the lack of firmness in the rope so here the performer places one foot on first. As the foot gains purchase on the rope the hands are moved up into the correct position for the swing through after.

Part2/ Cloud Swing

Crucifix to stand at front



1 2 3 4 5

6 7 8 9 10

This technique is very similar to the crucifix to sit at the front, but requires a stronger beat through the bottom of the swing (from 4 – 7). The feet are placed on one at a time once again due to the flexibility and lack of stability of the rope.