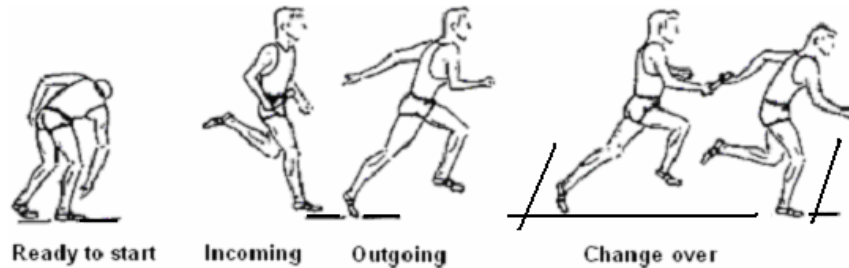


# ATHLETICS OMNIBUS - RELAYS

## From the Athletics Omnibus of Richard Stander, South Africa

The relay event is a team event, consisting of 2 or more athletes changing over a baton from one athlete to another while running as fast as possible. The objective is to transport a baton from point A to B as fast as possible. Relays are run over distances from 400m to a marathon. The total amount of athletes in a relay will also vary. The most commonly known relays are the 4 x 100m relay, 4 x 400m relay and the 1000m medley relay. Each of the relays has 4 athletes in the team.

### 1. 4 X 100M RELAY



#### RELAY CHANGE OVER SEQUENCE

Four individual athletes will make up a 4 x 100m relay team. The 4 x 100m relay consists of a 100m sprint with the first 10m and last 10m that serves as a change over zone where the baton is received and handed over respectively.

Theoretically, each athlete in the team runs 100m. In practice, the distance may vary between 90m to 110m per athlete, depending on the individual skills of the athlete in the team.

The main focus of the team is to ensure that each member of the team is technically sound during the relay. This means that:

- 1.1.1. The baton travel as fast as possible and without losing speed throughout the race.
- 1.1.2. The speed in the transfer zone is at full speed.
- 1.1.3. The baton remains in the same hand of the athlete from beginning to end.
- 1.1.4. The baton travels the shortest possible distance by constantly remains close to the line during the race, especially during the change over.

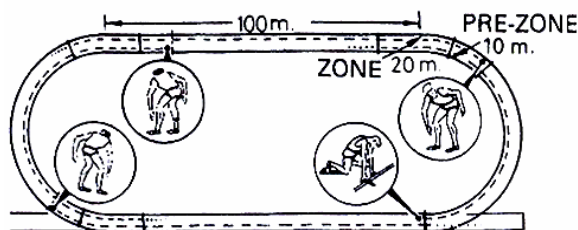
### 1.2. GENERAL FACTORS TO CONSIDER WHEN SELECTING A RELAY TEAM

The specific strengths of the 4 athletes in the relay team must be addressed as soon as possible, because all 4 athletes want to run the final leg of the relay. To avoid quarrelling among the athletes, determine which athletes are best suitable for specific positions and place them accordingly. The following points should be considered for team selection:

- 1.2.1. Which athlete is the fastest
- 1.2.2. Which athlete is the best starter
- 1.2.3. Which athlete can remain calm under pressure
- 1.2.4. Which athlete run best around the bend
- 1.2.5. Which athlete do best running the final leg of the relay
- 1.2.6. Which athlete maintain top speed the longest
- 1.2.7. Which athlete handle the baton best at full speed
- 1.2.8. Which athletes can judge distance best as incoming athlete and outgoing athlete
- 1.2.9. Which athletes are willing to work and train together

After placing the athletes based on the criteria above, it is possible that the fastest athlete in the group is not selected to run in the relay at all. Technical effectiveness is rated higher than the basic speed of an athlete. A technically sound, but slower athlete, is worth more than a technically weak, but fast sprinter. A slow athlete may cause the team to finish a 0.5 sec. slower. A Technically weak athlete can cause the team to finish up to 2 sec. slower.

### 1.3. SPECIFIC FACTORS TO CONSIDER WHEN SELECTING A RELAY TEAM



Assuming that the changeover takes place in the middle of the transfer zone, the runner running the first 'leg' of the relay will carry the baton 110m and the second athlete will run only 90m before the baton must change hands with the 3<sup>rd</sup> athlete.

If the change over of the second athlete takes place at the beginning of the first change over zone, and at the end of the second change over zone, the second athlete will run 110m and the 1<sup>st</sup> and 3<sup>rd</sup> athletes will run 90m respectively.

Many combinations can be worked out to favour the strengths of each athlete in the team. Other factors that should be taken in consideration are:

#### 1.3.1. Considerations for the 1<sup>st</sup> athlete starting

- Must be a good starter
- The leg is 90 -110m long depending on take-over points.
- Must run comfortably around the bend. Use the 200m specialist or long jumper
- The athlete with the worst change over must run first
- The athlete must carry the baton in the right hand
- The scarred or tensed athlete must run first

##### 1.3.1.1. Change over technique between the 1<sup>st</sup> athlete and the 2<sup>nd</sup> athlete

- Run in the inside of the track
- As bend runner, run the shortest possible route next to the line
- Give signal to 2<sup>nd</sup> athlete to stick out left hand backwards
- Pass the 2<sup>nd</sup> athlete in the inside of the 2<sup>nd</sup> athlete
- Hand over the baton to the 2<sup>nd</sup> runner without stretching the arm out forward

#### 1.3.2. Considerations for the 2<sup>nd</sup> athlete running the back straight

- The leg is 100 -120m long depending on take-over points
- Suitable for the fastest 100m-200m specialist
- Must be a left-hand carrier

##### 1.3.2.1. Change over technique of 2<sup>nd</sup> athlete exchanging to the 3<sup>rd</sup> athlete

- Stand on the outside of the lane
- Place a marker 8-10m before the start of the take-over zone
- Start sprinting when athlete 1 passes the marker
- Stick the left hand out backwards when athlete 1 give the signal
- Take the baton in the left hand and carry it without changing the position of the baton for the full length of the leg

#### 1.3.3. Considerations for the 3<sup>rd</sup> athlete running the 2<sup>nd</sup> bend

- Must be a good bend runner
- Must be the most experienced athlete. Both change over areas are technically challenging
- Must handle stress best. Usually a short hurdles specialist do well in this position
- Must be a right hand carrier

### 1.3.3.1. Change over technique of 3<sup>rd</sup> athlete exchanging to the 4<sup>th</sup> athlete

- Stand in the inside of the lane
- Place a marker 8-10m before the start of the take-over zone
- Start sprinting when athlete 2 passes the marker
- Stick the right hand out backwards when athlete 2 give the signal
- Take the baton in the right hand and carry it without changing the position of the baton for the full length of the leg
- Run the shortest possible route next to the line

### 1.3.4. Considerations for the 4th athlete

- Must be a good sprinter. The 100m specialist do well in this position
- Must be a left-hand carrier
- Must handle stress well. At the third change over the lanes are not staggered any more and all the athletes are close to each other during the change over. This causes the athlete to be confused.

### 1.3.4.1. Change over technique of the 4<sup>th</sup> athlete

- Carry the baton in the left hand
- Stand on the outside of the lane to allow for athlete 3 to pass in the inside
- Place a marker 8-10m before the start of the take-over zone
- Start sprinting when athlete 3 passes the marker
- Run the first strides in a straight line to gain speed quickly.
- Stick the left hand out backwards when athlete 3 give the signal
- Run full speed until the athlete passes the finish line

## 1.4. CHANGE OVER METHODS

### 1.4.1. TOP TO BOTTOM CHANGE OVER

The receiver reaches back with a fairly high and straight arm and with the palm of the hand facing upwards. The incoming athlete places the baton in his hand from the top to the bottom. This method is very fast, but requires a lot of practise, and is used mainly by high school and senior teams.



### 1.4.2. BOTTOM TO TOP CHANGE OVER

The receiver reaches back, naturally, with the elbow slightly bent and the fingers pointing downwards. The skills of this method are learned faster. The risk of losing the baton is less, but the pass is slower. Primary school teams mainly use this method.

## 1.5. KEY ASPECTS TO CONSIDER IN THE CHANGE OVER AREA

### 1.5.1. THE INCOMING ATHLETE

- 1.5.1.1. Is at all times responsible for the change over of the baton.
- 1.5.1.2. Must give a loud signal when approaching, because the spectators are usually very noisy.
- 1.5.1.3. Must pass the baton in such a way to allow for the next change over.
- 1.5.1.4. Must strive to run the shortest possible distance with a stretched arm during the change over.
- 1.5.1.5. Place the baton directly in the hand of the front athlete. Don't do unnecessary upward or downward movements during the change over. It will slow the change over down.
- 1.5.1.6. Run full speed through the transfer zone, even after the change over is completed. He must try to pass the outgoing athlete to avoid the tendency of slowing down during the change over.

### 1.5.2. THE OUTGOING ATHLETE

- 1.5.2.1. Don't look back during the change over.

- 1.5.2.2. Keep the stretched hand as still as possible.
- 1.5.2.3. Markers must be placed 24-31 feet lengths back on the track. Start with 24 and increase as needed during training sessions.
- 1.5.2.4. When an incoming athlete ran an exhausting race prior to the relay race, reduce the position of the marker with 5 feet lengths to ensure a change over inside the transfer zone.
- 1.5.2.5. The most mistakes are made during the second change over (between athlete 2 and 3). The risk of the change over taking place outside the transfer zone is big.
- 1.5.2.6. The marker must be visible and preferably bright coloured. Use a line rather than a dot.
- 1.5.2.7. Stand in a starting position with one hand almost on the ground, while looking backwards underneath the other shoulder at the marker. Look at the incoming athlete's feet, not the body.
- 1.5.2.8. Once started, the athlete must remain looking forward, and wait for the sign, before the hand is put back, or the hand can be put back automatically when he passes the middle line of the transfer zone.
- 1.5.2.9. Run full speed right from the start.
- 1.5.2.10. The baton must not change hands after the change over took place.

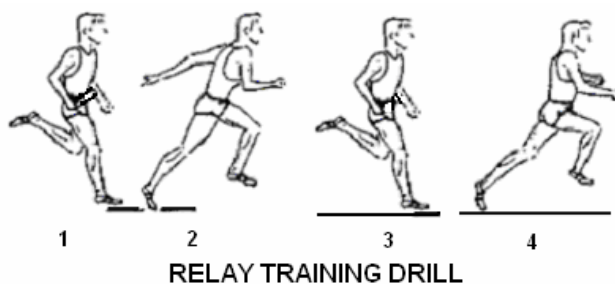
## 1.6. THE FUNCTION OF THE COACH AT THE COMPETITION

- 1.6.1. Keep record of the distances of the change over markers.
- 1.6.2. Check the markers and the correct distance of it. Tension causes the athlete to forget and will place them on the wrong place.
- 1.6.3. Always keep spare markers ready.
- 1.6.4. Determine the approximate relay time: take the best time of each of the athletes and add them up. Subtract then 3 sec. E.g.  $11,6 + 11,4 + 11,2 + 11,0 = 45,2$  sec. minus 3 sec. = 42,2.
- 1.6.5. Subtract 2 sec. for an inexperienced team.

## 1.7. TRAINING OF RELAYS

### 1.7.1. DRILLS

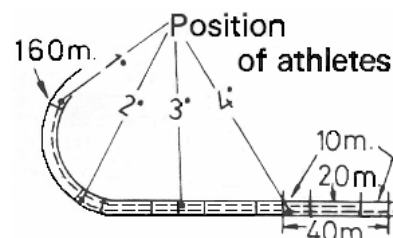
- 1.7.1.1. The 4 team members jog behind each other.
- 1.7.1.2. The athlete in the back (1) gives a sign.
- 1.7.1.3. The athlete directly in front (2) put out the hand when the sign is given.
- 1.7.1.4. The back athlete only changes over when the athlete in front put out the hand.



- 1.7.1.5. If the change over attempt in a race is too early, the front runner will run away. After the change over took place, the athlete that was in the back of the row sprint to the front of the row and jog in front of the other 3 relay athletes.
- 1.7.1.6. The back athlete repeats the sequence only after the athlete in front is in position.

### 1.7.2. COMPETITION SIMULATION

- 1.7.2.1. When training is done full speed, it should be done as close as possible to race conditions.
- 1.7.2.2. To monitor and control the change over easily, the following method can be used.
- 1.7.2.3. All the training is done at the third transfer zone.
- 1.7.2.4. The coach stands in the middle of the transfer zone, but far enough (30) to see the entire transfer zone simultaneously.
- 1.7.2.5. Athlete 1 takes a 30m approach run until full speed and change over to athlete 2 within the transfer zone.
- 1.7.2.6. The coach takes only times which the baton takes to travel across the outside lines of the zone. Emphasise the importance of a fast change over.
- 1.7.2.7. Athlete 2 walks back and take a 30m approach run till full speed and change over to athlete 3, etc.



- 1.7.2.8. This method ensures full control by the coach of the entire change over. Advice and comments can be made easily because the athlete is close by. Much more repetitions can also be done in a short space of time.

## 2. 4 X 400M RELAY

Four individual athletes will make up a 4 x 400m relay team. Technically each athlete in the team runs 400m. In practice the distance may vary between 390m to 410m per athlete.

The 4 x 400m relay consists of a 400m sprint with the first 10m and last 10m serves as a change over zone where the baton is handed over to the next athlete.

The main focus of the team is to ensure that each member of the team is technically sound during the relay to ensure that the relay baton do not reduce speed between the start and finish lines. This means that:

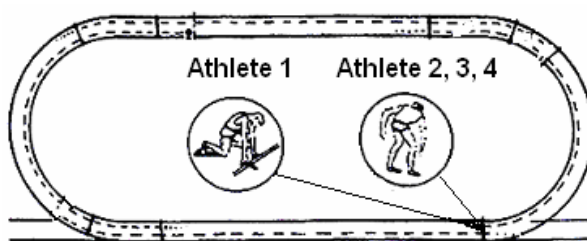
- 2.1.1. The baton must travel as fast as possible throughout the race.
- 2.1.2. The speed in the transfer zone is at full speed.

### 2.2. KEY THOUGHTS

- 2.2.1. Other than in the case of the 4 x 100m relay, it is the responsibility of the outgoing athlete to receive the baton.
- 2.2.2. The incoming athlete is tired and cannot control the baton sufficiently.
- 2.2.3. The fastest of the four athletes run the first leg, and must strive to achieve the biggest possible lead on his opponents.
- 2.2.4. The second athlete is 'fresh' and will create a bigger lead, because the incoming athlete of the other teams, are slowing down. He must run fast but tactically, to achieve the maximum advantage.
- 2.2.5. The weakest of the four athletes run the third leg.
- 2.2.6. The best fighter runs the last leg.

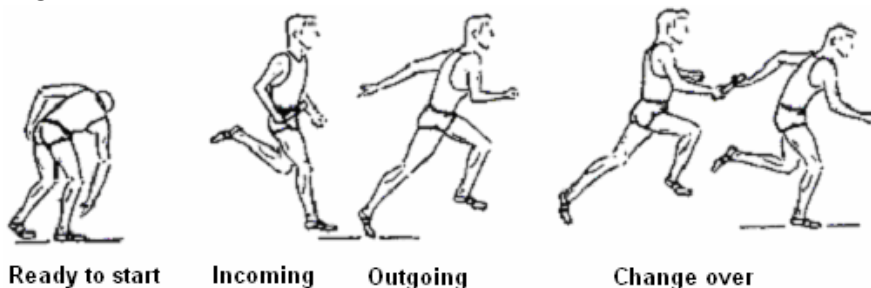
### 2.3. THE START

The first athlete starts in the same way as the 100m sprinter. Athletes 2, 3 and 4 start with a standing start, facing the infield.



Starting technique of athletes

### 2.4. THE CHANGE OVER



Ready to start

Incoming

Outgoing

Change over

RELAY CHANGE OVER SEQUENCE

- 2.4.1. The outgoing athlete reaches back with a fairly high and straight arm with the palm of the hand facing upwards and the palm pointing outwards. The hand must be fully open and the fingers spread, to enable the incoming athlete to see the hand easily.

2.4.2. The incoming athlete place the baton the hand of the outgoing athlete's hand from top to bottom

## 2.5. SPECIFIC INFORMATION

### 2.5.1. THE OUTGOING ATHLETE

- 2.5.1.1. Determine in which lane the team mate is running and move to that lane, to allow for a smooth change over.
- 2.5.1.2. Make sure the incoming athlete see the receiving athlete, by attracting his/her attention by means of a pre-determined sign. The incoming athlete is tired and cannot see well.
- 2.5.1.3. Judge the speed of the incoming athlete and ensure the same pace at the point of change over.
- 2.5.1.4. The change over is a visual change over, and the outgoing athlete look back to receive the baton.
- 2.5.1.5. Stand in such a way that he/she look towards the inside lane. This will enable the athlete to cut to the inside lane immediately. If the athlete looks the opposite direction, the athlete will run in front of the other athletes.

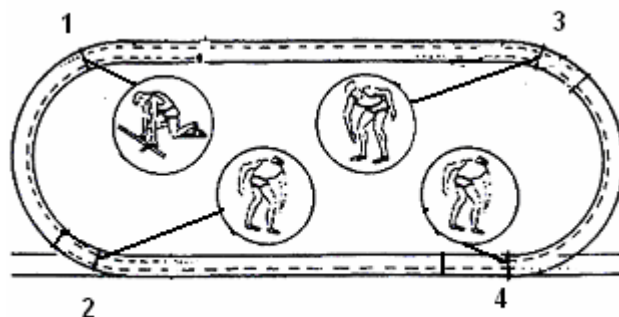
### 2.5.2. THE INCOMING ATHLETE

- 2.5.2.1. Must try to maintain the pace until the change over took place.
- 2.5.2.2. Look for the team mate 50m prior to the change over zone.
- 2.5.2.3. Place the baton quickly in the hand of the outgoing athlete before the hand close, or pulled away.

## 3. 1000M MEDLEY RELAY

Four individual athletes will make up a 1000m medley relay team. Technically the 1<sup>st</sup> athlete will run 100m, the 2<sup>nd</sup> athlete 200m, the 3<sup>rd</sup> athlete 300m and the 4<sup>th</sup> athlete 400m.

The 1<sup>st</sup> athlete will start at the 200m mark, the 2<sup>nd</sup> athlete starts at the bend at the 100m start, the 3<sup>rd</sup> athlete starts at the 1500m mark and the 4<sup>th</sup> athlete start at the 100m finish line.



**1000m Medley Relay Starting Order**

The main focus of the team is to ensure that each member of the team is technically sound during the relay to ensure that the relay baton do not reduce speed between the start and finish lines. This means that:

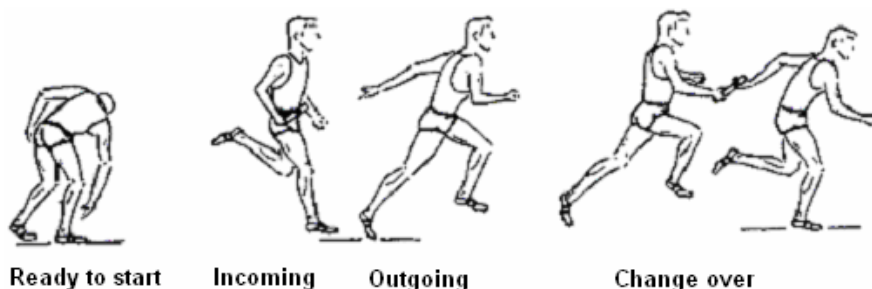
- 3.1.1. The baton must travel as fast as possible throughout the race.
- 3.1.2. The speed in the transfer zone is at full speed.

### 3.2. KEY THOUGHTS

- 3.2.1. Athlete 1 run a 100m around the 1<sup>st</sup> bend. The 100m-200m specialist must run the first leg.
- 3.2.2. Athlete 2 run 200m, the first 80m in the straight and the second bend. The 200m specialist must run this leg.
- 3.2.3. Athlete 3 run 300m and must be run by a 400m specialist
- 3.2.4. Athlete 4 run 400m and must be run by a 400m or 400m hurdles specialist.

### 3.3. THE CHANGE OVER

- 3.3.1. The outgoing athlete reaches back with a fairly high and straight arm with the palm of the hand facing upwards and the palm pointing outwards. The hand must be fully open and the fingers spread, to enable the incoming athlete to see the hand easily.
- 3.3.2. The incoming athlete place the baton the hand of the outgoing athlete's hand from top to bottom



RELAY CHANGE OVER SEQUENCE

### 3.4. SPECIFIC INFORMATION

#### 3.4.1. THE OUTGOING ATHLETE

- 3.4.1.1. The change over between athlete 1 and 2 is the same as for the 4 x 100m Relay.
- 3.4.1.2. For the change over between 2 and 3 as well as 3 and 4 the change over is the same as for the 4 x 400m Relay. Determine in which lane the team mate is running and move to that lane, to allow for a smooth change over.
- 3.4.1.3. Make sure the incoming athlete see the receiving athlete, by attracting his/her attention by means of a pre-determined sign. The incoming athlete is tired and cannot see well.
- 3.4.1.4. Judge the speed of the incoming athlete and ensure the same pace at the point of change over.
- 3.4.1.5. The change over is a visual change over, and the outgoing athlete look back to receive the baton.
- 3.4.1.6. Stand in such a way that he/she look towards the inside lane. This will enable the athlete to cut to the inside lane immediately. If he/she looks the opposite direction, he/she will run in front of the other athletes.

#### 3.4.2. THE INCOMING ATHLETE

- 3.4.2.1. Must try to maintain the pace until the change over took place.
- 3.4.2.2. Look for the team mate 50m prior to the change over zone.
- 3.4.2.3. Place the baton quickly in the hand of the outgoing athlete before the hand close, or pulled away.

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