

**BCC203**

**PRINCIPLES AND TECHNIQUES OF OFFICIATING AND  
COACHING (TRACK &FIELD)**

**Unit I:**

Age and sex categories of athletes

Entries

Clothing, shoes and Athlete Bibs

Assistance to athletes

Protest and Appeals

Duties and powers of International Officials

Management Officials

Competition Officials

Additional Officials

**Unit II:**

Dimensions and layout of track events

Rules & Regulations

Track event measurements and specification of equipment

Track and field Layout of track, sprint, hurdle, middle, long distance events, relay and Jump events

**Unit III:**

Dimensions and layout of jump events.

Rules & Regulations

Track event measurements and specification of equipment

Track and field Layout of long jump, high jump and pole vault.

**Unit IV:**

Dimensions and layout of throw events

Rules & Regulations

Track event measurements and specification of equipment

Track and field Layout of shortput, discus, javelin, & hammer throw

**Unit V:**

Combined Events Competitions Race Walking Events - Cross country Races - Mountain races -  
Trail Races scoring

**Reference:**

1. Buck Rules of Sports and Games, Published by NCYIs, New Delhi
2. Jenson G. and Fisher A G, (1972). Scientific Basis of Athletic Conditioning, 2<sup>nd</sup> edition, Lea and Febiger, Philadelphia
3. Jones RJ and etal., (1982). Guide to Effective Principles and Practices, Allyn and Bacon, Inc
4. Lawther JD (1951). Psychology of Coaching, Prentice Hall, Inc, Englewood Cliffs, New Jersey  
Rules of Games, Published by International Association of Respective Sports and Games
5. Singh H (1984). Sports Training, General Theory and Physical Fitness, NIS, Patiala
6. Thomas J P(1971). Scientific Weight Training for Sports and Games, Gnanodaya Press, Madras
7. Glady Kirubakar. S, (2009).Tennis Skills-ATeacher's Guide, SS Publication, Chennai
8. Glady Kirubakar and Glory Kirubakar (2009). Play Ball Badminton, SS Publication, Chennai

## TRACK EVENTS

Sprint Events : 100 M 200m 400m

Middle Distance: 800 M, 1500m

Long Distance: 3000m, 5000m, 10,000m

Hurdles : 100m , 110m, 400m

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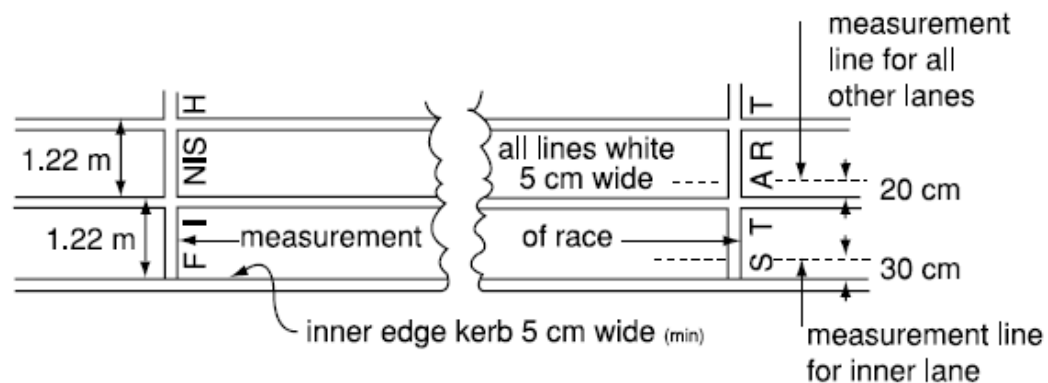
Steeple Chase : 2000M, 3000M

### **TRACK EVENTS- RULE 160**

Track length- 400m ; Two straights & Two curves; Straight – 84.39 mts

**KERB- 5mx 5m width- white ; Kerb on straight may be omitted and 5 cm line can be drawn**

If kerb to be removed on curves ; **5cm white lines- cones or flags(60degree )- 20cm ht- 4m interval ; In -Split starts 10m intervals**



**Lane- 1.22m width**

- **Lateral inclination** of track- 1:100(not to exceed) new track- lateral inclination is towards inside lane
- **Overall inclination** in running direction– 1:1000(not exceed) downwards

### **STARTING BLOCKS- RULE 161**

- Used for all races up to and including 400m
- Rigid and no unfair advantage to athlete
- Own block- comply with rules , may be of any design or construction
- Should not interfere with other athletes
- Consists of two foot plates on rigid frame
- Surface of footplates should accommodate spikes
- Foot plates should be adjustable but no movement during start

### **CLOTHING**

- Wear **clean, non transparent** even if wet
- Athletes vest should have **the same color on the front and back**
- Uniform should be **approved by their National Governing Body**

## **SHOES**

- Athlete may compete barefoot or with footwear on one or both feet
- Should not give any unfair additional assistance
- Unfair advantage
- Shoe strap over the instep is permitted
- All types of competitions shoes must be approved by IAAF

## **THE START- RULE 162**

- Denoted by white lines 5cm wide
- Races which are not in lanes be in curves
- Lane numbered from left to right in direction of running
- All races up to and including 400m
  - Crouch start
  - Starting blocks are compulsory
- Starter can **use command only in English** in
  - World Athletics series
  - Olympic Games
  - Competitions not from single area
  - International Invitation meets under IAAF
  - Inter area competitions
- If the **starter is not satisfied** after athletes are on their marks- **order athletes to withdraw**
- Except in international matches starter can use commands in his own language, **English** or in French
- Up to and including all races 400m

“ON YOUR MARKS”... “SET “ ... GUN SHALL BE FIRED...”

### **False start**

After start commands before gun if athletes comes out of blocks misconduct – **RED**

### **CARD**

Referee shall **warn the athletes**

- Without valid reason ( raising hands, delay, standing etc)
- Disturbs other athletes by sound
- Starter shall abort the start

### **Green card**

- If extraneous reason for aborting the start
- After assuming final start position, shall not commence his start- if so disqualified
- Red card is shown to the athlete
- After false start duties of Starter’s Assistant

\*\*athletes shall be disqualified - show **red card** in front of him on respective lane markers

### **Approved False Start Control Apparatus**

When an IAAF approved false start control apparatus is in use, the Starter and/or an assigned Recaller shall wear headphones in order to clearly hear the acoustic signal

emitted when the apparatus indicates a possible false start (i.e. when the reaction time is less than 0.100 second).

- As soon as the Starter and/or an assigned Recaller hears the acoustic signal, and if the gun was fired, there shall be a recall and the Starter shall immediately examine the reaction times on the false start control apparatus in order to confirm which athlete(s) is/are responsible for the recall.

*Note (i): Any motion by an athlete that does not include or result in the athlete's foot / feet losing contact with the foot plate(s) of the starting blocks, or the athlete's hand / hands losing contact with the ground, shall not be considered to be the commencement of his start. Such instances may, if applicable, be subject to a disciplinary warning or disqualification*



### **THE FINISH -RULE 164**

- Denoted by white line 5cm wide
- Athletes placed in order in which **any part of their bodies** ( ie: torso distinguish from head, neck, arms, legs , hand or feet) **reaches vertical plane of the nearer edge of finish line**

### **MIDDLE DISTANCE & LONG DISTANCE**

**Middle Distance -800 M & 1500m**

**Long Distance- 3000m, 5000m, &10,000m**

- **In races longer than 400m : ON YOUR MARKS ... GUN SHALL BE FIRED.....**

**Athletes shall not touch the ground with hands during start 800m & 1500m STARTS**

**800m- Staggered Start- Half Stagger + Diagonal Excess**

**1500m- Staggered Start**

- *The 1500m start line may be extended out from the outside bend lane to the extent that the same synthetic surface is available.*



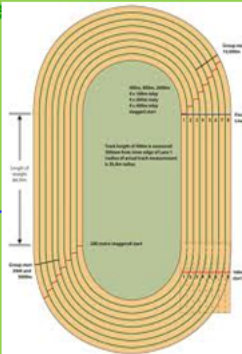
- **International competitions 800 m shall be conducted in lanes ( till break line in first bend)**



## 3000m, 5000m & 10000 m STARTS

### SPLIT STARTS

- When **more than 12 athletes**
  - two groups **65%- regular arced start line**
  - **35%- separate arc start line marked across the outer half 5 x 5cm white line** (cones or flags)
- All athletes are positioned that they run same distance



### BREAK LINE

Break line is drawn at the start of straight 84.39m in the back straight in an arc form

**5cm wide-across** all lanes except lane 1- identified with small **cones 5cm x 5cm not more than 15cm high**- different color-placed on lane lines before intersection of lane line and break line

cones 5cm x 5cm not more than 15cm high



## THE RACE - RULE 163

### DISQUALIFICATION

- Athlete obstructs another athlete
- An athlete running on bend shall **not run on or inside the kerb or line marking.**

### RE RACE

- Referee has the authority to Conduct **re race** excluding disqualified athlete
- If preliminary round, **allow to compete** in subsequent round
- Such athlete should have completed the event with **bona fide effort**
- **Regardless of whether any disqualification in exceptional cases referee has the authority for re race if reasonable**

### ATHLETES - NOT TO BE DISQUALIFIED

- ❖ When runs outside his lane in straight
  - ❖ Or outside the outer line of his lane on the bend
  - ❖ With no material advantage being gained can continue his race no other athlete being obstructed
- Athlete shall not be disqualified – when pushed or forced by another person**

### Obstruction

- 2. If an athlete is jostled or obstructed during an event so as to impede his progress, then:
- (a) if the jostling or obstruction is considered unintentional or is caused otherwise than by an athlete, the Referee may, if he is of the opinion that an athlete (or his team) was seriously affected, order that the race be re-held or allow the affected athlete (or team) to compete in a subsequent round of the event;



Athlete after **voluntarily leaving** the track shall **not be allowed** to continue the race



### WIND GAUGE- measures wind velocity



Equipment should be certified by IAAF

- Started and stopped automatically and or remotely
- Information conveyed directly to competition computer



### READINGS IN WIND GAUGE

- Measured in **m/sec**
- +2.03 m/sec is +2.1 m/sec (positive direction)
- \_2.03 m/sec is \_2.0 m/sec



### POSITION OF WIND GAUGE

- Beside straight- **adjacent to lane 1-**
- **1.50m from finish line**
- 1.22m height
- **not more than 2m away from track**



- The period of **wind velocity** shall be measured from the **flash of the starters gun**
- **100 m- 10 sec**
- **200m- 10 sec** when 1<sup>st</sup> athlete enters the straight
- **100m hurdle- 13sec**
- **110m hurdle- 13 sec**



## TIMING AND PHOTO FINISH RULE 165

- **Hand timing**
- **Fully automatic timing obtained from a photo finish system**
- **Timing provided by transponder system**
- **Times for all finishers shall be recorded**
- **Lap times in races of 800m and over and intermediate times at every 1000m in races 3000m and over shall be recorded**



### TIMING

#### HAND TIMING

#### FULLY AUTOMATIC



### HAND TIMING

- **Time keepers shall be in line with finish line- 5m away- elevated stand**
- **Use manually operated electronic timers with digital read outs- termed as "watches"**
- **Time shall be taken from the flash /smoke of the gun**  
**3 official TK (1 Chief TK- 1 OR 2 Add.TK)- for Winner of the event**



#### TIME KEEPER

- act independently
- **Not show watch or discuss time**
- **enter his time on official form**
- **sign**
- **hand over to chief time keeper**
- **Chief TK decide official time for each athlete and provide the results to competition secretary**





## Timing For Races On Track

100m- 10.11sec is recorded as 10.2 sec

### Partly or entirely outside stadium

**Marathon- 2:09:44.3 recorded as 2:09:45**

**In 3 watches – 2 agree and 1 disagree=time recorded by 2 watches will be official time**

**If all 3 watches disagree-middle time shall be the official**

**If only 2 times available and disagree- longer time shall be official**

### FULLY AUTOMATIC TIMING AND PHOTO FINISH SYSTEM

- System approved by IAAF- Test for accuracy 4 yrs prior to competition
- Started automatically by the starters gun
- The system must record the finish through a camera positioned in the extension of finish line producing a continuous image
- The intersection of the lane lines and finish line shall be coloured black not more than 2cm beyond or before edge of finish line
- The system automatically record finish times and produce printed image showing time of every athlete

**Olympic Timing: Track**

1 Jan Dobson	1:42:45.458
2 Gary Jones	1:48:54.345
3 Mo Shafiq	1:48:43.456
4 Bill Jackson	1:48:54.544
5 Rita Purvisall	1:48:47.334

Scoreboard displays race time.

Timing Console

Photo finish camera provides finish time of race.

Direction of travel

Individual Starting Blocks

Finish Line

Loudspeaker allows all athletes to hear starting gun at the same time.

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- Chief photo finish judge is responsible for functioning the system
- Two assistant PFJ with CPFJ determine the placing and time of each athlete
- Convey results to competition secretary
- Meet technical staff to familiarize with equipment
- With track referee and starter conduct "zero test" before competition to ensure that the equipment is started automatically by the starters gun
- At least Two photo finish cameras one from each side of the track and technically independent (1 designated as official by the technical delegate)

Results Computer with Eagle Eye and Meet Management software

Timing Computer with Eagle Eye software

drop-in-drop connection

Manage Results & Meet Events

HYTEX

Research & Health Events

Digital Converter

Video Camera Aligned on the finish line

Pyro-Flash Timer Triggered by the flash of the starting gun

Video Cable

- Time from Photo finish image is recorded as
- Races up to and including 10'000m(1/100) as 26:17:53
- For all races on track longer than 10000m  
Eg: 20,000m, 59:26:32(1/100<sup>th</sup>) shall be recorded as 59:26:4(1/10<sup>th</sup>)
- For all races partly or entirely outside the stadium  
Time shall be read to 1/100<sup>th</sup> and recorded to whole second  
Eg: Marathon 2:09:44.32 as 2:09:45




## TRANSPONDER SYSTEM

- Approved by IAAF
- Used for races 800m and above held completely in or outside the stadium( Race walking,Road races &Cross country running)
- No obstacle to athlete while running
- Weight of transponder, housing carried on athletes uniform, bib , shoe not significant
- System is started with starters gun or synchronized with start signal
- System requires no action by athlete during competition
- Time recorded as Eg:Marathon 2:09:44.32 as 2:09:45





### TIES - RULE 167

- If the judges or photo finish judges are **unable to separate** the athletes for any place – **TIE Shall remain**
- If tie between athletes in different heats for
- **1. ranking**
- **2. qualifying position** -For subsequent round based on time
- For qualifying position tying athletes shall be placed in **next round if not possible, lots shall be drawn**

Chief photo finish judge shall consider time to **1/1000<sup>th</sup> of second**

If tie remains- tie shall be broken by **draw**