RELAY RACING

The deserved popularity of relay running is easy to understand. It can provide **spirited competition** for every type of runner from the sprinter up to the 1500 m/miler. Baton changes introduce **an element of hazard** which **adds excitement** to an already spectacular event. The relays 4 x 100 and 4 x 400 were added to the Olympic programme in 1912, and these are the two relays I shall concentrate upon in the next few pages.

4 x 100 relay

The three baton changes should take place **within the 20 metre change over box** provided at the 100, 200 and 300 metre points. In addition ,an **acceleration zone of 10 metres** is provided within which the outgoing runner may start her/his leg of the relay. **[The baton may not be exchanged in this 10 metre acceleration zone].**

In order that the fastest change may be achieved the baton should be carried in the **right hand** of the **first runner**, passed to the **left hand** of the **second runner** , to the **right hand** of the **third runner** and to the **left hand** of the final team member. There is no need to change hands, receive the baton in the correct carry hand.

The **first runner** will angle the blocks to the point where she/he will make contact with the inside lane. As the baton is in the **right hand** and the first leg will be run close to the inside lane, the **second runner** should take up a **crouch position** on the outside of the lane, looking back over her/his **left shoulder** , but **inside** the **10 metre acceleration zone** . An alternative will be the same position but just inside the 20 metre **take-over box**..

The **second runner** will wait until the **first runner** hits the **check mark** (a previously agreed point achieved by lots of practice) She/he will **explode** along the outside of the lane, head facing the front, and **count** the **agreed** number of strides until **positioned** in the **latter half** of the take-over box. The **left hand** will then be **extended** and the **incoming** runner will **swing the baton upwards** into the **V formed** by the **palm** and **thumb** of the **outgoing** no 2. runner, which must be held **steady – no wiggling!!!.** This is a **non visual upsweep** relay change.

In my humble opinion this is the **best change** to teach in a club context. I was taught by the **Great Britain relays coach**, and have achieved 14 **British Championship** medals with the **Woodford Green A. C**. relay teams. Over a number of years we were never disqualified nor did we ever drop the baton. Our best team performance was probably winning both relays at the European Inter Club Championships..

The no 2 athlete has now successfully grasped the baton **within the zone**, and is sprinting on the **outside** of the lane towards the **third runner** waiting at the 200 metre mark. This time the no.3 runner is in a **crouch position** on the **inside** of the lane, looking over her/his **right shoulder**. Again the **outgoing athlete** will **remain still** and watch for the **incoming foot** to **hit the pre – arranged check mark** before turning the head forwards and **accelerating strongly** away around the **inside of the lane**. The no.3 runner will reach the **mid point** of the take-over zone, and hang the right arm back ready to receive the upswept baton into the **V formed by the thumb and palm**

of the hand. As long as the **receiving arm is held steady** and a **successful change** is made, the third runner will **fly the bend** and prepare to pass to the fourth runner who is waiting at the end of the curve.

Runner no. 4 is in a **crouch position** on the **outside** of the lane, looking back over her/his **left shoulder**. As soon as the incoming foot **hits the check mark**, the head snaps forwards, the final runner **sprints vigorously** on the outside of the lane to a place mid way through the take-over zone. The **left** arm is **hung back** and the baton **upswept into the V**. The final runner can now sprint the final leg with every effort.

There are a **number of considerations** to note before we talk about the actual **technique of calculating** the all important take-over **check mark**:-

1. As the race **proceeds** the amount of **baton length** available for **the change** becomes **shorter**. It is the **responsibility** of the **incoming** runner to ensure there is **sufficient baton** to **upsweep** into a **successful change**.
2. The **first runner** must be a **reliable starter**, run well on a **curve** and be **skilled** at **handing off** the baton. She/he will run about **105 m**. with the baton.
3. The **second** athlete must be **skilled at receiving** and **handing off** the baton, there are **no curves** to be run, and the athlete runs further with the baton than the no. 1 runner.
4. Runner **number 3** must be **good at receiving** and **handing off** the baton, as well as being able to **run a good bend**. Again, there is a **longer distance** than the first runner to be run from acceleration zone to acceleration zone.
5. The **final** runner must be **skilled at receiving** the baton, and be able to **maintain good form** whilst **sprinting under pressure**: she/he should also **display fighting spirit** as relay finishes can often be **frantically close**.
6. If changes are **successfully carried out** in the **latter half of the take over box** then the **final runner** will run a **shorter distance** than runners 2 and3
7. The **incoming runner** has the responsibility to **shout instructions** to the **outgoing athlete**. As the change is **non visual**, the incoming runner must **rapidly assess** if the change is going to work. If not, then the **commands STOP or GO should be shouted**.. Obviously no athlete will actually stop , but the **intention** is for the athlete to **slow slightly** to enable the change to be successful. **SLOW** and **GO** are too similar sounding to be used in the heat of the racing moment.

Now we come to the **crucial calculation** of the actual **check mark** to be utilized by runners 2, 3 and 4. This process **will take time**, and once established will require **constant revision** as athletes become **fitter, stronger, faster etc.**
All practice changes must be carried out at **top speed**, any thing less is a waste of time and effort. Because of this restriction, the **number** of practice changes will be **comparatively small**, but always **high quality.**

Bearing in mind that the **incoming** runner is already at **full speed**, and the **outgoing** runner is **aiming** to attain **full speed** in say 20 metres(10metres acceleration zone plus 10 metres takeoverbox), it is obvious that the **outgoing** runner will need to **concentrate** on **absolute explosive effort** to the **max** once the **check mark** has been **reached** by the **incoming** runner

The **starting practice mark** could begin at say, **4 metres**,(and then adjusted depending on results) and should be **indicated** with a **bright** sticky **tape** placed on the **inside** of the **lane** (outgoing runners 2 and 4) and **outside**of the **lane** (outgoing runner 3)
Constant practice of the **change overs** ,and the **crucial check marks** will lead to the outgoing runners having **implicit faith** in the **agreed mark.**
The **outgoing runner** must **stand** her/his **ground** and **concentrate** on the **mark** only. To **anticipate** the **start** is a **crime**, since it entails **slowing down immediately** afterwards for fear of **over-running** the front restraining **zone line**. The efficient use of **check-marks** demands **courage, decision**, and **acute mental alertness**

Excellent baton changes can lead to a performance where "**free distance**" of say 4 metres can be **achieved** (i.e. the baton is not carried but is passed three times between extended arms)..The forward reach by the giver and the snap through by the receiver will impart an **extra element** of **baton speed** to the whole relay process, and give the **well practiced team a fully deserved advantage**..

4 x 400 metre relay

First and foremost, the 4x 400 metre relay involves visual baton exchanges.
The very nature of the 400 metre distance means that the **incoming runner** has **very little athletic resources** remaining at the **end** of her/his leg. I am assuming that the 400 metre distance has been **treated with respect** and has been run **correctly.**
However, the **outgoing runner** is **fresh** and bears the **heavy responsibility** of **watching** the **baton safely** into her/his hand at the change over . With the **right arm** extended back, the **head and trunk** are turned back to make the **visual change.**
She/he may have to **remove** the baton from the **exhausted clutch** of the team mate.
If the **incoming athlete** has run her/himself out, the preservation of **"baton speed"** demands an **early relief** almost on the takeover zone **back line.**

The **receiver's aim** must be to use what little incoming **"baton speed"** there is to the **utmost advantage.** Once the **last portion** of effort has been pulled from his **preceding** team mate, the athlete must **firmly grip** the baton in the right hand, and **instantly accelerate** to full 400 metre **pace.** The baton should be **transferred** to the **left hand** , allowing **plenty of baton** to be gripped by the next runner.

The **" flying start'** is a **great asset** and should **not** be **squandered.** At the **initial change** the first runner would have run their leg with a **600 metre stagger**.i.e. the usual spacing between the runners is longer than the usual 400 stagger. Because of this longer stagger it is **likely** that the handovers will **not be too crowded.**
However, the **no. 2** runner must **run the first bend in lanes** and only break for the inside lane after their first bend(the 500 metre mark). This is where the team can really see where it is **positioned,** and the flying start becomes important in the teams efforts to **hit the lead.**
The **second** runner hopefully having taken the lead, must make **every effort** to hold that position down the **back straight**, and **into the bend.** It is **easier** to **fight off challenges** if one has the premier position.

Just **before** the **bend unwinds every effort** should be made to **maintain baton speed** and to **kick off the bend** to discourage pursuit.. Now the no**. 2 runner** has **sight** of her/his no **3** runner. If she/he is **clearly** in the lead then the no.**3** runner will move to the **inside position** to receive the baton. **However, this may be where the fun starts**. If there are 8 teams competing, and there is **close competition** between the no. **2** runners , then the no. **3** runners have to **sort out** where they should be at changeover time, **bearing in mind** that the **positions may change dramatically** in the final few metres of the 400 leg.
This means that there could be **16 athletes competing** for the **best change over position** in a very small space of track. This **potential mayhem** can be highly entertaining for the spectators, but it surely **tests the concentration, skill** and **resolve** of the athletes involved. Even at **Olympic level** batons are **dropped,** valuable metres **lost,** and **reputations ruined** at this time. To **prevent** any of these **mishaps** it is preferable to **practice these changes** , particularly changes 2 and 3 to **perfect the technique**, and to establish what to do under pressure..

Back to the race – the no.**2** runner has made eye contact with the no. **3** runner and the no **3** runner has taken up the **best position** in respect to the placing of **the incoming runner**. When this **position has been established** the no **3** runner must **hold** his/ her **ground.** The incoming runner will be **very tired** , and **cannot be expected** to make **last second changes** to her/ his **finishing effort**.
The **outgoing** runner has **responsibility** for **moving off** at the correct speed to **take advantage** of the **forward baton speed**, and **making** the **change** in the **most efficient** manner possible. Once the change **has been made** (left to right visual, followed by changing baton to left hand) then the no. **3** runner is **flying** into the bend and **making decisions** such as **running extra hard** to **catch** the runner in **front** ,or **waiting until the final straight** to **pick off the runner** ahead.
Of course, the no **3** runner may already be **ahead** of the pack . In which case, **every effort** must be made to **maintain maximum baton speed**, and to **be aware** of any **challenge** to the **premier position**. The **back straight** should be covered **very fast,** and the **bend** should offer a little protection **against challenges**, but then **the finishing straight** appears ahead and the no. **3** runner must **pin point** and make **eye contact** with her/ his **no 4** runner **waiting** at the change over position.

Once the **final** change is made, the no. **4** runner has the baton in the right hand and need not bother to change to the left., unless she/ he wishes to **protect** the baton against **accidental collisions** with other competitors. The **final runner** is invariably the **strongest runner**, someone who **does not know their own limits**, and is a **strong finisher**, whatever their condition at racend. Quite often, **relay runners** are able to run **superior times** in relay races , often posting **PB performances**. There is something about being **part of a team** that **frees the individua** from the mental restraints often incurred in individual races..

Note
There are many other relay combinations – 4 x 200, Medley, 4 x 1 Mile , etc.
I have not covered these excellent events but it is worth noting that the **4 x 200** should be run with **visual changes**, and will require **much practise** to perfect safe, fast and efficient baton changes.

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