Coaching the 4x100 Relay
In my opinion, the most exciting race in Track and Field.

**Important Factors:**

- Speed
- Team Work
- Patience
- Confidence
Let’s begin with a simple Question
What’s the Long Leg of the Relay?
Answer → There is no Long Leg in the 400 Relay!
It’s called the 4x100 Relay
NOT THE 3X96.6-1X110 RELAY
If done properly everyone should carry the baton 100m.

In terms of actually running distance with the idea that the baton is exchanged in the middle of the zone the lead off leg should run 100 meters and the actual running distance of the three remaining athletes is 120 meters.
Now that we’ve established the distance of the relay and the legs let’s talk about selection of and placement of relay personnel.
Question-Where should your best starter run on your relay?
Most people would answer the lead off
But what if your best starter doesn’t run a good turn. If that is the case you are better served to run a better turn runner versus a great starter.
Question-Where should your fastest runner run on the relay?
Most would answer on the anchor leg
But what if your fastest guy is also your best turn runner. Are you putting your team at a disadvantage by putting him or her on anchor?
In my opinion when setting up the relay you must take a good look at the strengths of your athletes not just their raw speed.
In my opinion the ability to run the turn outweighs the ability to start well. I’d rather have an efficient started who runs a good turn and finishes well.
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2nd Leg

Needs to be a good enough athlete to handle the baton with his or her left hand and also be a good finisher.
3rd Leg

Would also need to be a good turn runner, but also be a good finisher
The two things I look for here are poise and competitive nature. Of course speed and ability to finish are factors.
Exchange Zone

Question-ideally where should the baton be exchange in the zone?
– Most people answer “as soon as possible.”
– When asked why, most people answer “because I want to get the baton to the fresher or faster runner ASAP.”
– The outgoing runner by 10 meters is traveling about 7-7.5 meters per second
– The incoming runner is traveling at about 10-10.5 meters per second
– So my question would be why would you want to get the baton to the slower moving athlete as soon as possible?
So I target the middle of the zone. The numbers I look at are 18.5-19.5 this is in my opinion the best point for the exchange to happen. Keep in mind that the number 18.5-19.5 represents where the outgoing runner is in their acceleration, NOT where the baton is in the zone. The baton is actually 8.5-9.5 meters into the zone.
How do we achieve this?

You have to move the go mark back! I often hear coaches say I can’t put the mark too far away or I’m afraid her or she will leave the incoming runner. So the mark is placed close and one of two things happen, both leading to disaster.
1. The outgoing runner trusts the mark or leaves a little late and gets run over.

2. Because they instinctively know that the mark is too close they leave too soon and the exchange never happens.
On occasion you get the “wow you left before the mark but we still had a good exchange” effect. What that tells me that the go mark should be placed further back to duplicate that good exchange you just achieved.
Determining Go Marks

- I like to use a box (ours is four feet). Fitness levels and training cycles play a role here. We could start the year at 26-30 and end the year at 29-33. Through trial and error in practice, video sessions with and without your athletes you should be able to achieve desired marks.
Relay Practice

- We don’t spend lots of time on the relay, but the time we spend is very serious.
- In looking at velocity of most 100 meter runners the velocity at 40m and 100m is very close. So during practice I use a 40m run in for all practices. I know some people like to go back further, but my experience with 40m has been spot on.
- The goal of our relay practices is to achieve two good exchanges. execute two good exchanges at full speed we move on to the next zone.
How Do We Get Better in the 4 x 100 Relay

We must change our mindset, we still think of 38 / 43 seconds as being fast. When we start looking at 38 / 43 seconds as normal and start targeting 37 / 42 seconds we will start running faster in the relay. The Collegiate Record in the Men’s 4 x 100 is 38.04 set by TCU WAY BACK in 1998, 17 years ago! The Fastest time run since then is 38.29, so if the athletes are faster and we have better tracks to run on, why has no one approached that record?

MIND SET! We look at that record as untouchable and we shouldn’t look at it that way. The Women CR is 42.36 by Tx A&M (09) the previous record was 42.50 by LSU (89) the record lasted 20 years!
Take the time of the four relay members best 100 and subtract .24.

So a time of 10.24 would give you 10.00

So if a team’s members run

10.24 – 10.20 – 10.30 – 10.10 their raw times would be

10.0 – 9.96 – 10.06 – 9.86 for a total time of 39.88
These are real relays

10.50 – 9.96 – 10.25 – 10.09 - Projected
38.23 – Ran 38.69

10.07 – 10.19 – 10.15 – 10.28 – Projected
38.12 – Ran 38.57

38.59 – Ran 38.38
Questions???