

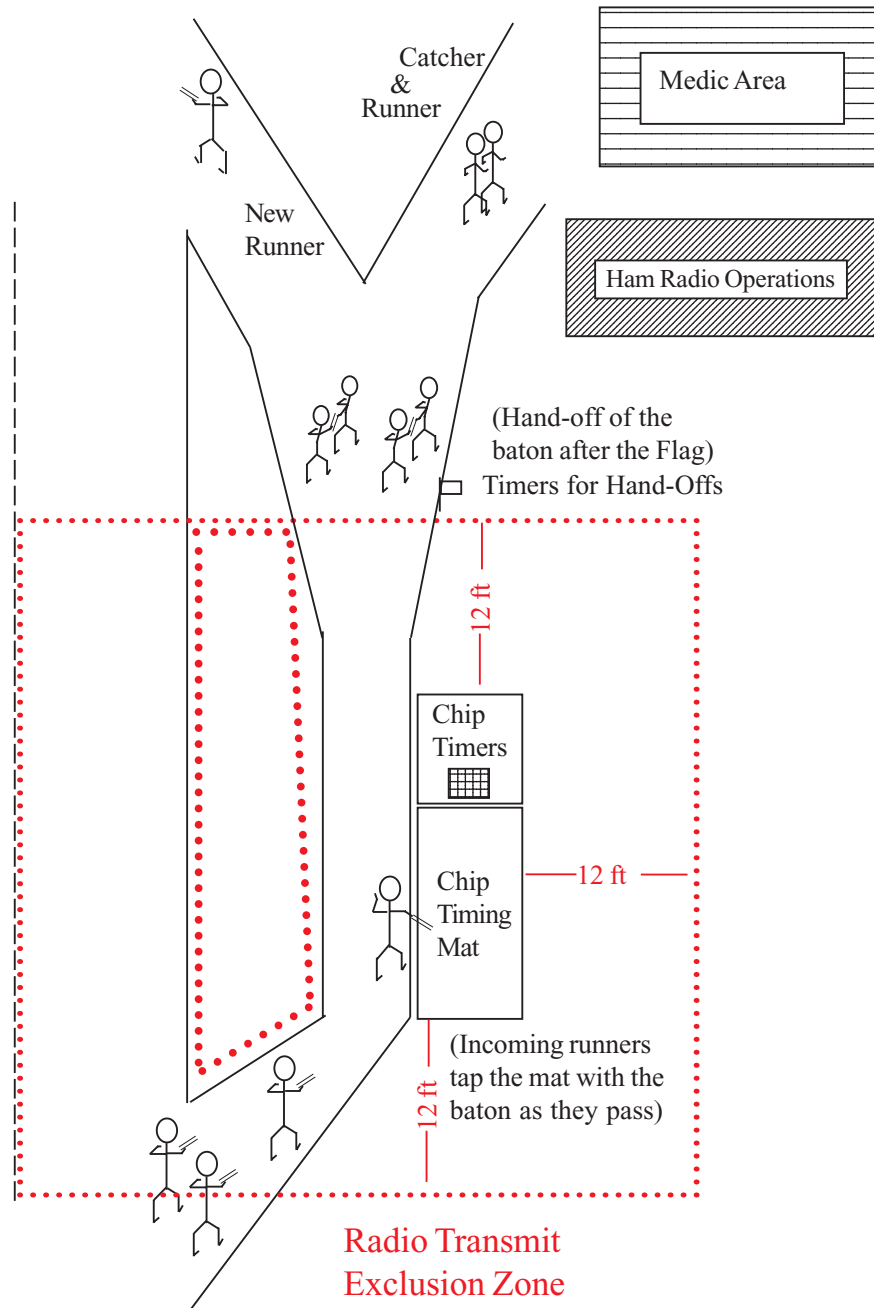
Timing Instructions

Each stage will have two separate sets of timers for the runners as they come into the chutes and hand off the baton. One set will keep the arrival order log and the traditional time of day by wristwatch and the second set will be logging a read or no-read function on the chip timing machines. Each of these positions have become much more important as the individual teams themselves are not doing any timing from the follow vehicles.

Below you will see the diagram that is to be used in laying out the chutes with the locations of both sets of timers clearly marked. The chip mats are very susceptible to radio interference so there must be a radio transmit exclusion zone around the timing set up. No one should be inside this perimeter with any type of radio or other device containing an RFID chip such as car keys, speed passes or ID badges. This zone also extends into the first lane of traffic and all teams have been cautioned against transmitting within the exclusion zone.

CHUTE SET UP DIAGRAM

Exchange Chute is to be 32 INCHES wide and 30 feet long.
RUNNERS MUST ENTER THE CHUTE SINGLE FILE!!!!



CHIP TIMER/SPOTTERS

The Chip Timing system is to be set up at the very front of the exchange chute. The entry to the chute from the road will be funnel shaped and by the time the runner reaches the table with the timing mat they will have to pass the mat one at a time. Each runner has 10 seconds to clear the mat area before the RFID chip in the baton reads a second time. Different chips register at a rate of a new one every 1/10 of a second. So you may get a string of runners through the chute and each chip should register into the system separately.

For this system to work each runner must be holding the baton with the chip in his/her right hand and they should tap the mat with the baton as they run by. As the chip registers into the system the timing mechanism will sound an alarm and the display screen on the box will show as read. DO NOT pay attention to the numbers or other information that comes across the screen. The numbers do not match the team number or the chip id, so you will not be able to track anything beyond the read or no read on the display. If there is no audible tone and the display shows a no read message, call the runner back and have him/her tap the mat a second time. If it still shows as a no read, record that on the provided read/no read log sheet and **IF** you have time, note the time it happened and the bib number of the runner. You may only have time to place a check mark in the no read column of the form. We can reconstruct the needed information from other sources so getting more information is not a priority and **MUST NOT** be allowed to interfere with the verifying of the remaining runners coming into the stage.



The illustrations to the left are of the two different types of timing devices. The only difference in the two is that one is a single unit and one has two separate boxes linked by cables. Each of these boxes need to be hooked into a "car type" battery to act as a backup for the internal batteries in the devices. On each of the boxes is a screen where you will see the read/no read display. As noted earlier there will be other items displayed in the screen, but these items are of no value and should be ignored, we are only interested in the read/no read portion of the display as shown below. When we tested the equipment the unit showed no gun instead of no read. It is the same thing and is located in the center of the top line on the CRT screen in the timing units. The display shows grey and the text is black, I have shown it here in green to call your attention to the placement for your focal point while looking at the display.

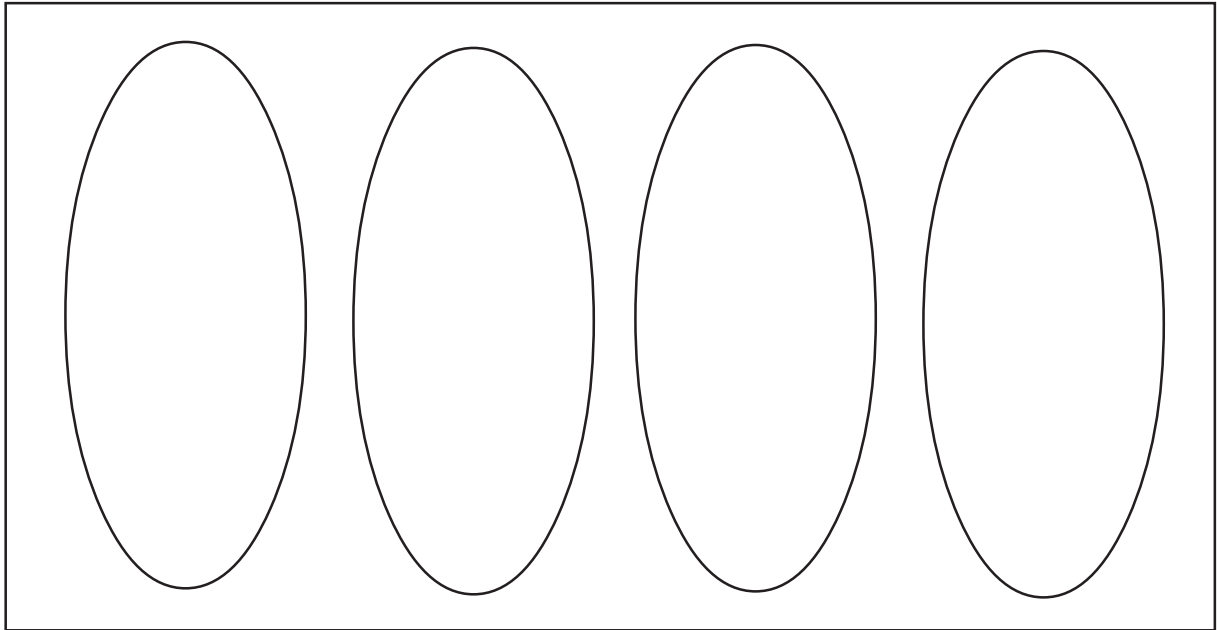


IP:	no gun/read	time
dksfdf6	f01: 01557	Master/Slave

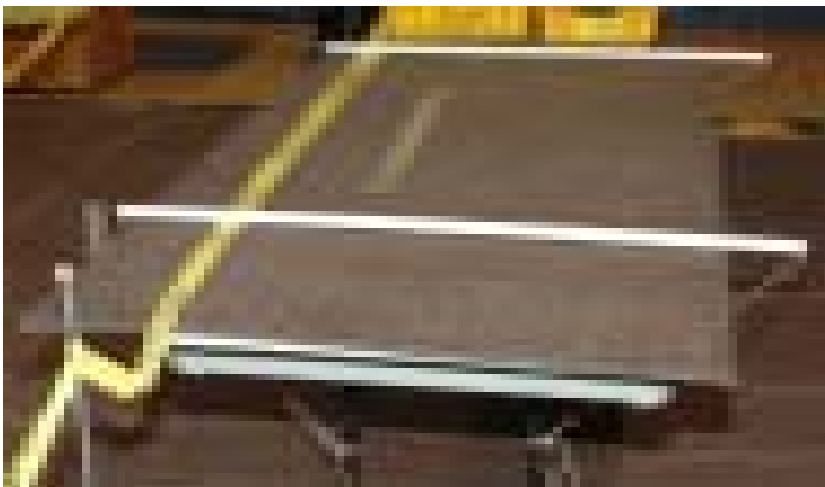
For this process to work, we must have a minimum of two people at the chip timing station. One must be in a position to look at the screen and verify the read/no read for each runner. The second person will have the responsibility to keep the log and documentation for the system.

CHIP TIMING MATS

As you can see from the image below the timing mats are quite large. The small ones are 1 Meter across and 2 meters long, roughly 33 inches x 6 feet long. They are composed of multiple layers of material with four loop antennas in the middle like the drawing below.



Because of these antennas the edges must be protected from crimping over the edge of the table. In the picture below we are showing the best way to protect the mat and at the same time secure it to the table by way of pvc pipes and parachute cords. You all know the potential that we have for wind and the last thing we need is to have the mats take off on us mid race. The cords may either be tied to the table and the table staked down or you may tie the cords to the stakes under the tables and tie it all down at the same time. The mats need to be set on plastic topped tables with minimal metal framing that does not come into direct contact with the mat to provide the best possible field for the mats to work. On the day we were testing the mats one of them had a dead spot in it. If this happens race day try to mark the spot with tape and tell the runners not to tap the baton in that spot.



Above you will see an example of the chute set up as it widens and allows for the staging of the outgoing runners as they pass the flag and proceed to handoff the baton. The timers may allow an outgoing runner to go back in the chute *providing the chip has been read* if the incoming runner has made it past the chip timer and can't make it to the flag. If the timers do not authorize this, the team **WILL** be subject to a penalty.

OFFICIAL TIMER/SPOTTERS

The second set of timers will be set up at the flag and after the chute has started to widen to allow more than one team to be staged for handing off the batons. They will be one the edge of the no transmit zone but should not be in it, and so may carry and or talk on radios if necessary. These timers will record the official arrival order of the runners as they pass the flag. Wristwatch time is to be used on this set of forms and notes are to be taken as appropriate. These timers are the ones who will have the discretionary judgement as far as an outgoing runner being allowed to go back down the chute to take the baton from a struggling incoming runner who has cleared the chip timing mat. If a team does this without the authorization of the timers, the team will be assessed a Hand-off before flag penalty.

We must have the timer's name on the Official Arrival Order documents.

Please fill out all the times in pencil so that mistakes can be corrected cleanly.

The Official Handoff Log sheets are white in color. **Use only the white sheets for the Runners ID Log.**

Request that the Stage Director maintains a clear area around the Timer/Spotter/Handoff area. You must be able to see the Runner as they cross the Flag Line. Make sure to keep the catchers towards the back end of the chute. ***NO ONE - should be allowed to obstruct your view !***

The Spotter Official should be located next to the Timer. The Spotter Official shall log the number as the runner passes the flag. They shall also make note of any rules violation in the penalty column. **DO NOT** watch for a hand off or make any comments about no hand off! Use the back of the sheet for any special notations for the rules penalty committee to review!

1. **If a runner arrives wearing a yellow bib**, they are running for a downed runner which is a penalty. Place **DR** in the Penalty Column.
2. **If a runner moves out in front of the chute and takes the baton from a runner**, place the notation **HO-B4Flag** in the Penalty Column. The team will become UNOFFICIAL per rule 4.3
3. **If a runner arrives with their bib hidden** then place **BIB HID** in the Penalty Column.
4. **If a night time runner arrives without a reflective vest with flashers, or a regular reflective vest worn with a flashing arm band**, place **NO VEST** in the penalty column. These vests must be worn from 7 pm to 7 am with no exceptions allowed.
5. If a team fails to turn off their sound as they pass the Stage, place **SND** in the penalty column.