

# **CLINIC FOR PACIFIC**

# **USA LDR**

# **OFFICIALS<sup>©</sup>**



**PRESENTED BY**

**PACIFIC ASSOCIATION  
USA TRACK & FIELD**

**PRICE \$ 10**

**EDITED BY GEORGE KLEEMAN**

**UPDATED FOR 2003**

December, 2002

## INDEX

	Pg.
<b>INDEX</b>	i
<b>INTRODUCTION TO OFFICIATING</b>	
Introduction	1
Officiating	1
Where to Start	1
What is USA Track & Field?	1
What do you need to be an LDR Official?	1
Purpose of Officials	1
Code of Ethics for Officials	1
Types of LDR Officials	2
Levels of Officials	2
Benefits of an Athletic Official	2
How do I join?	2
Area Certification Coordinators, Chairs	5
Addresses for Rule Books	5
<b>OFFICIATING OVERVIEW</b>	6
Introduction	6
Problem Solving and Avoidance	6
Clerk of the Course	6
What Do You Do	6
Equipment for Clerk	6
Competitive Secretary (Scorer)	7
Umpire	7
Common Situations	7
Impeding or Jostling	7
Relay Races	7
Assistance	7
Reporting an Infraction (Umpire Report)	7
Umpire Report	8
Starter	8
Equipment for Starters	8
PreMeet Duties	8
PreRace Duties	8
The Finish System (Finish Judges & Timers)	8
Taking and Recording Hand Times	9
Recording Finish Places	9
How to Set Up a Finish Line	9
Fully Automatic Timing	10
How an Accutrack Picture is Taken	10
Film Handling	10
Reading	10
Reliability	10
Finish Line Administration with Automatic Timing	11
Other Automatic Timing Devices	12

## INTRODUCTION TO LDR

### INTRODUCTION

This handbook on LDR Officiating is an attempt to put the rules of officiating into clearer terms than the rulebooks by comparing the different books and point out similarities and differences. It is copyrighted and the property of the Pacific Association of USA Track & Field, Inc. Reproduction for personal use only is authorized . If you need to use it for clinics of your own or multiple copies please obtain permission of the editor and author George Kleeman. An attempt is made to keep it up to date each year with the rule changes made by each governing body. However, an official should always read the applicable rulebook before each meet to make sure he or she understands the small difference between the rules of each ruling body. The rulebook is the authoritative source. This handbook merely attempts to interpret the rulebooks in the manner in which the rules were intended. Generally the author has confirmed the interpretations given with members of the appropriate rules committees. This handbook is dedicated to all those officials that give of their time and talent each week to support the sport we all love. Other information can be gotten from the Pacific Association website at <http://www.pausatf.org>.

### OFFICIATING

**So you want to be a LDR official!** There are several hundred competitions in Northern California and Northern Nevada each year, and that doesn't count the high school or collegiate cross-country programs. A well-run event takes about 50-60 volunteers, many should be certified or at least trained officials. Unfortunately you will rarely see that many officials at a meet. We do it with less but the meet suffers. In addition there are hundreds of track and field meets and about 25-30 racewalk competitions. Although these take many more officials since each event has its own rules and demands. We will attempt to introduce you to all these types of officiating.

The need is at all levels and in all disciplines, Youth, High School, Junior College, College, Open, IAAF and Masters. We have participants as young as 5 or 6 to over 90. They range from recreational and club athletes to serious world class and Olympic stars. We have a lot of the latter among the 5000 plus athletes who are members of the Pacific Association. On the other hand, there are many more participants in events we officiate at than there are members. We are working to improve that and hope your work as an official will give them an incentive to join USATF.

## WE NEED YOUR HELP!

### WHERE TO START?

For common skill areas like timing, clerking, umpiring you can come to the All Comers Meets at Cal or Los Gatos High School in January and February each year or to summer meets at Los Gatos High School, Chabot Junior College at Hayward, or Alhambra High School in Martinez. Attend a clinic. Get and read the rulebooks for the level and area that you want to officiate. Go down to your local high school or junior college cross country meet or local road race, and volunteer to help. They are always in need of officials.

### WHAT IS USA Track & Field?

USA Track & Field (USATF) is the national governing body for the sport of Athletics in the United States. Athletics includes the sports of Track and Field, Race Walking and Long Distance Running including Cross-Country and Road Racing. It is responsible for local, national, and international competitions and is the US representative to the IAAF, International Association of Athletic Federations that governs international competitions including the athletic portion of the Olympic Games and the World Championships. USA Track & Field is made up of 57 associations, which are the local working groups. In California there are 4 associations. On the north from the

Oregon Border to just north of Fresno and east to Winnemucca is the Pacific Association. In the valley from Fresno to Bakersfield is the Central California Association. Then along the coast from about San Luis Obispo to just south of Los Angeles is the Southern California Association and finally in and around San Diego is the San Diego-Imperial Association. Each has its own governing board and its own organization and programs.

### WHAT DO YOU NEED TO BE A LDR OFFICIAL?

- ◆ Desire.
- ◆ Common sense and tact.
- ◆ Willingness to work long hours for very little.
- ◆ Love of the sport of Athletics.
- ◆ A high level of concentration.
- ◆ Ability to read, understand and interpret the rules.
- ◆ Quick reactions.
- ◆ An assertive but not abrasive manner.
- ◆ Leadership.
- ◆ Understanding of the needs of the athletes.
- ◆ Time to officiate.
- ◆ Be courteously but firm in enforcing the rules.
- ◆ Ensuring the safety of the competition.
- ◆ Go down to your local high school, junior college, college or road race and volunteer to help. You will be welcome!

### PURPOSE OF OFFICIALS:

- \* To help athletes get their best performance in a safe and equitable competition.
- \* To be seen but not heard.
- \* To know and apply rules fairly and in an unbiased manner for all, so no one has either an advantage or a disadvantage. Rules are intended to help i.e. solve rather than cause problems.
- \* To explain rules clearly and use common sense and tact in applying them.
- \* To make decision in the spirit of fair play in situations not covered directly by the rules
- \* To maintain a safe competition for athletes, officials and fans both during warm-ups and the competition.
- \* The needs of the athletes must be considered first but you need to be in charge.
- \* Not to coach.
- \* Not to socialize during the competition with athletes, coaches or other officials.

### CODE OF ETHICS FOR OFFICIALS:

- + Be punctual and honor commitments and assignments.
- + If you have committed to a meet and find you're unable to attend, notify that meet's head of officials ASAP.
- + Come prepared. If possible bring your own officiating tools, rulebooks, and raingear.
- + Review and know the rules for the events you will be officiating. Know which set of rules the meet is being conducted under.
- + Cooperate with Meet Management. Be part of the team.
- + Dress appropriately and maintain a proper and dignified appearance at all times. Be aware of the uniform of the day.
- + Do not use tobacco products on the course.
- + Do not drink or take drugs.
- + Be professional, positive, calm, in charge, diplomatic, friendly but not companionable. Never yell at another official, an athlete, a coach or a spectator.
- + Officials should approach their job as a means of helping to have a fair competition rather than as being "out to catch the athlete at something".
- + Never hamper, embarrass or berate fellow officials. If a correction or clarification is needed, do it in private. Remember that officials make mistakes too. If absolutely necessary to do it during a competition, you can call a conference. Have the discussion and take care of the problem in a sensible, timely manner.

- + Apply the rules objectively and courteously so that no competitor has an unfair advantage or suffers a disadvantage, i.e. fair to all competitors. None of the rulebooks cover every possible situation. Sometimes the interpretation of a particular rule in a unique situation may cause differences of opinion, even among experienced officials. Remember the intention versus the letter of the rule in making your decision.
- + Ignore spectators or coaches comments.
- + Keep the safety of the athlete, officials and spectators in the forefront at all times.
- + Start on time and keep things moving without rushing. It helps competitors to be able to warm-up properly.
- + Expect no compensation but personal satisfaction in a job well done.
- + The rules use words like "must" and "shall" to imply that this rule is compulsory and use "should" when it is hoped that the rule will be followed but that strict compliance is not essential.
- + Approach each meet as if it were the Olympics!

#### TYPES OF LDR OFFICIALS

Starter	Finish Line Clerk of Course	Umpires	Marshals
Competition Secretary (Scorer)		Jury Of Appeals	Chute Officials
Photo Evaluator	LDR Official	Referee	Lap Scorer

#### LEVELS OF OFFICIALS

Membership as an Official in USATF indicates an individual's desire to apply the rules of the sport in a general officiating capacity. Certification means that an individual is sanctioned by the local Association and the National Governing Body as being capable of officiating in any capacity when called upon at a competition. The level of responsibility assigned a particular individual in an officiating situation is reflected by the individual's demonstrated expertise and level of certification in specific event categories, and by the competitive level of the event. In the Pacific Association we recognize five levels of officials.

A **Local Level USATF Official** is an individual who wishes to be associated with the organization and, on occasion, assists with officiating related functions. This level is intended to provide individuals with local Association organizational membership and benefits while promoting proper officiating practices and experiences. This level of official is not certified or registered with the National Committee.

An **Association Level Certified USATF Official** is an entry-level position and is the first level of official Certification. This level does not require any previous experience in officiating in the sport and, as a result, has limited responsibility. Supervision is generally required for all Association Level Officials. Association Level Officials are general officials with no areas of expertise. It is assumed that Association Level Officials will choose one or more specialty areas and obtain the necessary training, within a reasonable time period, to permit advancement to the next level.

A **National Level Certified USATF Official** is an individual who has clearly demonstrated officiating proficiency in one or more specialty areas and an overall desire to officiate. A National Level Official is fully prepared and trained to make officiating decisions without supervision in specific competitive areas in the sport, in addition to general officiating. The National Level of certification is awarded to an individual based on factors which include training, experience, measures of proficiency, activity level and peer evaluation. National Level certification is in a specialty area(s) within the sport and would be the normal level for most long-standing, generally active, certified officials.

A **Master Level Certified USATF Official** is an outstanding individual who is extraordinarily skilled in officiating specialized areas. This level is reserved for those who clearly assume leadership roles and usually demonstrate proficient abilities in a specialty area. Master Level certification is earned by

individuals who have unquestioned officiating ability as a result of training and experience in one or more of the specific event areas listed in the USATF Rule Book. The Master Level Official demonstrates this ability in the training of others. Advancement to Master Level certification is not an automatic process, and is awarded only in specific areas of active involvement by the certified official.

An **Emeritus Level Certified USATF Official** is a master level official who wishes to continue their affiliation with the organization, but in a non-active status. Emeritus level officials are welcome at all functions and receive all correspondence.

#### PACIFIC ASSOCIATION'S OFFICIALS UNIFORM

In the Pacific Association we use the same uniform as the national uniform for USA Track & Field Officials. For the outdoor season we use the National summer uniform, which consists of tan slacks or skirt, white shirt, white sox and white shoes and a blue Gambler style hat. Currently each association has its own hat. Most of the components of the uniform can be bought at most department stores. The hat can be purchased from Tom Mews of the Southern California Association, 72 W. Sierra Madre Blvd., Arcadia, CA 91006-1637, phone 626-355-9838 and fax 626-355-8408 for about \$15. There are other sources for extra uniform items such as windbreaker jackets, nametags, belts etc.

#### BENEFITS OF AN ATHLETIC OFFICIAL

- Long Hours
- A soggy sandwich and a lukewarm drink
- Sometimes a hat or a shirt
- If you're lucky, you get a thank you, which makes it all worthwhile.
- But remember you do have the best seat in the house to see the competition in your event and share in the joy of an athlete reaching a personal best performance.
- Well, it is free! Well, almost free.

#### HOW DO I JOIN?

The procedure for becoming nationally certified through the Pacific Association is outlined below. Certification, at any level, by the National Track & Field Officials Committee is for an Olympiad, a four-year period. Membership in the Pacific Association-USATF as an Official is annual, and is required. The annual membership fee in the association is currently \$15 and is due between November and January each year. It helps defray the cost incurred for mailings, a track and field schedule, the bimonthly California Track and Running News, an officials newsletter, insurance, equipment purchases, limited uniform items, and includes any fees required by the National Officials Committee. Certification is a procedure available to any individual who registers with the PA-USATF as an Official and becomes recognized as completing various requirements in order to administer adequately the rules of the sport through an officiating capacity. The first year the fee is \$20 because of the additional cost of national officials' registration, paper work and test.

The National Officials Committee has set guidelines and prepared materials used in the certification process. Each Association has full responsibility to establish and implement the procedure used for certification, for the members of the Association. The general requirements as set for each level by the Pacific Association are outlined in the following sections. The requirement objective for each level is designed to ensure that proper training, experience, proficiency and desire exist before that particular level of certification is granted to the individual. The Pacific Association Certification Committee may accept varying documentation or alternative procedure, based upon each individual's case, in order to satisfy the requirements within each level. The National Officials Committee requires recertification once each Olympiad. The procedure for recertification at a level is also included in that section.

**LOCAL LEVEL.** To become a *Local Level* LDR Official you must complete the following steps.

For your initial membership submit to the Association Certification Chairman:

- A Pacific Association - USA Track & Field membership form filled out with official as one of the membership categories and the annual membership fee of \$15.

Renewal each year:

- Pacific Association - USA Track & Field membership form filled out with official as one of the membership categories and the annual membership fee of \$15.

Renewal each Olympiad:

- An updated USA Track & Field *Application for Official Membership / Certification* form with your experience during the last Olympiad.
- Pacific Association - USA Track & Field membership form filled out with official as one of the membership categories and the annual membership fee of \$15.

**ASSOCIATION LEVEL.** To become an *Association Level* Certified USA Track & Field Official you must complete the following steps. This level is the first level of National Certification.

For initial certification submit to the Association Certification Chairman each of the following:

- A USA Track & Field *Application for Official Membership / Certification* form;
- Pacific Association - USA Track & Field membership form filled out with official as one of the membership categories and the annual membership fee of \$15;
- USA Track & Field National Officials' Committee Certification fee of an additional \$5 for the Olympiad;
- Two photos, 1" x 1", with your name printed on the back if you want your picture on your national certification card or an electronic version;
- A resume indicating officiating responsibilities and activities, if any for the last two years;
- A completed open book written exam on general LDR rules, compiled from the USATF rule book, scoring 80% or better;
- Complete a Pacific Association Level 1 Officials' Training Clinic for LDR program within two years of your initial membership. This is being developed.

Renewal each year:

- Pacific Association - USA Track & Field membership form and fee each year.

Renewal each Olympiad:

- An updated USA Track & Field *Application for Official Membership / Certification* form each Olympiad;
- Pacific Association - USA Track & Field membership form and membership fee;
- USA Track & Field National Officials' Committee Certification fee for the Olympiad;
- A resume which shows active involvement in officiating appropriate for this level once each Olympiad;
- A completed open book written exam on general Track & Field rules, compiled from the USATF, NCAA, and HS rule books, scoring 80% or better.

**NATIONAL LEVEL.** To become a *National Level* Certified USA Track & Field Official you must clearly demonstrate officiating proficiency and desire by completing the following information for your chosen area(s) of expertise. Alternative documentation and procedures, agreeable to the Association Certification Committee, may be used.

For initial upgrading to this level submit the following to the Association Certification Chairman:

- Be currently certified and paid up member at the Association level for at least two years before submitting your application for upgrade
- An up to date USA Track & Field *Application for Official Membership / Certification* form indicating the desired area(s) of officiating specialization at the National level;

• A resume indicating meets worked and your responsibilities in officiating at the Association level in an average of at least 5 meets per year in the area(s) of specialty desired in the following types of competition:

- Meets under IAAF rules
- Meets under USATF rules
- Meets under NCAA rules
- Worked in at least once in each of the separate areas of officiating: finish line (photo evaluator, timer, judge, umpire), starting line (starter, recall starter, clerk), Chute officials (umpire, controller, tag puller) and scorer or competition secretary.
- A completed open book written exam on rules in your area(s) of specialty, scoring 90% or better, each Olympiad.
- Complete a Pacific Association Level 2 Officials' Training Clinic within two years prior to submitting your application for National certification. (If not already completed, you will also need to take a Level 1 clinic.)
- Receive approval for this certification level from the Association Certification Chairman and the certification committee.

Renewal each year:

- Pacific Association - USA Track & Field membership form and fee each year;

Renewal each Olympiad:

- An updated USA Track & Field *Application for Official Membership / Certification* form.
- Pacific Association - USA Track & Field membership form and fee;
- USA Track & Field National Officials' Committee Certification fee for the Olympiad;
- A resume indicating officiating responsibilities and active involvement in officiating in an average of at least 5 meets per year in the area(s) of specialty desired in the following types of competition:
  - Meets under IAAF rules
  - Meets under USATF rules
  - Meets under NCAA rules
  - Worked in at least once in each of the following separate areas of officiating: finish line (photo evaluator, timer, judge, umpire), starting line (starter, recall starter, clerk), Chute Official (umpire or controller, tag puller) or Scorer/ Competition Secretary.
- A completed open book written exam on general Track & Field rules, compiled from the USATF, NCAA, and HS rule books, scoring 90% correct or better within the Olympiad;
- A completed open book written exam on rules in your area(s) of specialty, scoring 90% or better, each Olympiad.

**MASTER LEVEL.** To be promoted to a *Master Level* Certified USA Track & Field official, the following items are considered significant by the Committee in helping them evaluate an official in preparing to award this level. Alternative documentation and procedure, agreeable to the Association Certification Committee, may be used.

For initial upgrading to this level submit to the Association Certification Chairman each of the following:

- An updated USA Track & Field *Application for Official Membership / Certification* form indicating the area(s) of officiating specialization at the Masters level;
- Pacific Association - USA Track & Field membership form and fee for the current year if not previously submitted;
- A resume indicating service as a National Level official for three year by listing the meets you worked and your officiating responsibilities in each. You must have averaged at least 5 meets per year in the area(s) of specialty desired in the following types of competitions:
  - Meets under IAAF rules
  - Meets under USATF rules
  - Meets under NCAA rules
  - Worked in at least once in three of the following four separate areas of officiating: finish line (photo evaluator, timer, judge, umpire), starting line (starter, recall starter, clerk), Chute Official

(umpire or controller, tag puller) or Scorer/ Competition Secretary.

- A completed open book written exam on rules in your area(s) of specialty, scoring 90% or better, each Olympiad;
- Completed three short essay questions on track & field situations and/or philosophy;
- At least one letter of recommendation from a current Master Level Official indicating your ability as an expert official within the specific area(s) of officiating desired;
- Complete, or participate in, a Pacific Association Level 2 Officials' Training Clinic in the past five years;
- Receive approval for this level from a majority of the Association Certification Committee.

Renewal each year:

- Pacific Association - USA Track & Field membership form and fee each year;

Renewal each Olympiad:

- An updated USA Track & Field Application for Official Membership / Certification form.

- Pacific Association - USA Track & Field membership form and fee;

- USA Track & Field National Officials' Committee Certification fee for the Olympiad;

- A resume indicating officiating responsibilities and active involvement in officiating in the following types of competition for an average of at least 5 meets per year in the area(s) of specialty desired:

- Meets under IAAF rules

- Meets under USATF rules

- Meets under NCAA rules

- Worked in at least once in three of the following five separate areas of officiating: finish line (photo evaluator, timer, judge, umpire), starting line (starter, recall starter, clerk),

- Chute Official (umpire or controller, tag puller) or Scorer/ Competition Secretary.

A completed open book written exam on general Track & Field rules, compiled from the USATF, NCAA, and HS rulebooks, scoring 90% correct or better within the Olympiad;

- A completed open book written exam on rules in your area(s) of specialty, scoring 90% or better, each Olympiad.

- Completed three short essay questions on LDR situations and/or philosophy.

**EMERITUS LEVEL.** This level may be requested by anyone who has been a Master Level Certified Official for at least ten years, and who wishes to continue their affiliation with the Pacific Association Officials Committee, but on a non-active status. Yearly dues are not required for this level.

Renewal:

Notify the Association Certification Chairman by January 1 each year that you want to maintain this status.

**AREA CERTIFICATION COORDINATORS:**

The coordinators are there to help you with certification information and problems. Please contact them as your first source of information for certification information.

North Bay:	Joe Harper	707-728-1814
South Bay:	Lori Maynard	650-369-2801
Sacramento:	Bill Edgar	916-966-5814
San Francisco/East Bay:	Bruce Coleman	415-775-5450
Peninsula:	Sonny Maynard	650-369-2801
Reno/Central Valley:	Marty Growdon	530-256-3918

Certification Chair-Pacific Association

Richard Zulaica  
769 Duke Circle  
Pleasant Hill, CA 94523  
925-687-8423 and Fax 925-687-1166

E-Mail [richzulaica@home.com](mailto:richzulaica@home.com)

Officials Chair-Pacific Association

Dick Connors  
2065 Kings Lane

San Mateo, Ca 94402

650-341-6781

Email [dicconnors@aol.com](mailto:dicconnors@aol.com)

**ADDRESSES FOR RULE BOOKS**

**INTERNATIONAL COMPETITION:**

IAAF International Association of Athletic Federations  
17, rue Princesse Florestine

BP 359 - MC 98007 Monaco Cedex

Published every two years, the newest is 00/01. Cost is \$12 available from USA Track & Field also.

Web Site: [www.iaaf.org](http://www.iaaf.org) Rules at [www.iaaf.org/iaaf](http://www.iaaf.org/iaaf) Rules & Regulations

**NATIONAL COMPETITION:** (Rules for Junior Olympics, Youth, Masters Open and Handicapped Competition)

USA TRACK & FIELD Book Order Department  
P.O. Box 120

Indianapolis, In. 46206

317-638-9550

Published every year at a cost of \$12, available in late January and on USATF Web site at [www.usatf.org/events/technique.htm](http://www.usatf.org/events/technique.htm) as a PDF file.

**COLLEGIATE/JUNIOR COLLEGE COMPETITION:** (Generally not needed except for XC)

NCAA National Collegiate Athletic Association

P.O. Box 6222

Indianapolis, Indiana 42606-6222

317-917-6222

Published each year at a cost of \$6.50 available in December.

Web Site: <http://www.ncaa.org/library/purchase.html> for ordering information.

**HIGH SCHOOL/JUNIOR HIGH COMPETITION:** (Generally not needed for LDR except XC)

NFSHSA National Federation of State High School Associations

NFHS Customer Service

P.O. Box 690

Indianapolis, IN 46206

1-317-972-6900 Fax 1-317-822-5700

[www.nfhs.org](http://www.nfhs.org)

Three books are published at a cost of \$7.00 each. They are Track and Field Rulebook, Track and Field Officials Manual, and Track and Field Case Book. The rulebook and casebook are annual and the official's book is biannual. The latest are Rules for 2001, Casebook for 2001, and Officials Manual for 2001 & 2002. These are available in November each year. Web site: <http://www.nfhs.org/catalog-index.htm> for ordering information.

**OFFICIALS ORGANIZATIONS:**

**USA Track & Field Officials**

Jim Flanik National Federation Interscholastic

National Officials Cert.Chair Officials Association (NFIOA)

7300 D Forest cove Lane P.O. Box 690

Northfield Center, OH 44067 Indianapolis, IN 46206

(330-468-6363 (Home) 317-972-6900

[jflanik@aol.com](mailto:jflanik@aol.com) Web site: <http://www.nfhs.org>

**PACIFIC ASSOCIATION USATF** Officials Training Chair PAUSATF

120 Ponderosa Court George Kleeman

Folsom, CA 95630 5104 Alhambra Valley Road

916-983-4715 (Office 10-2) Martinez, CA 94553-9773

916-983-4624 (Fax) 925-229-2927 (Home)

Website: <http://www.pausatf.org> 925-229-2940 (Fax)

E mail [georgekle@aol.com](mailto:georgekle@aol.com)

## ROAD EVENTS OFFICIATING OVERVIEW

### INTRODUCTION:

The officiating jobs on the road are the Clerk of the Course, the Competition Secretary, the umpire, the starter, the finish line made up of timers and finish line judges plus image finish officials and the finish chute officials. In some events there may also be a finish line coordinator and a Lap Scorer.

### PROBLEM SOLVING AND AVOIDANCE:

One of the best ways to have a good meet is to avoid problems before they occur. The following are recommendations for all meets and all officials.

1. Start on time. This gives the athletes, coaches and other participants' confidence that the meet will be run properly.
2. Make crisp, clear and decisive decisions. Confusion is the fastest way to make people unhappy. Only one person is unhappy when a decision is made quickly. When there is confusion or decisions are not made or changed there will always be more than one person unhappy.
3. Know the rules.
4. Know the system. Know how to direct people to other for answers. Do not try to do someone else's job. If the referee can only make a decision then pass the problem along to the referee and do not decide or offer an opinion.
5. If you're the head of an area, monitor your help. Make sure that they know how and what they should be doing and occasionally checking on how they are doing in their roles of judging, timing or umpiring.

### THE CLERK OF THE COURSE:

The clerk of the Course is responsible in maintaining the time schedule, gathering the athletes prior to competition, checking uniforms, giving out numbers and assigning starting areas. The Clerk is also responsible for escorting and placing competitors at the correct starting line and with adequate instruction for fair participation in the event. It is very important that a means of informing the announcer of changes or special needs be established to ensure that the Clerk can communicate with the proper athletes at the appropriate time.

The Clerk of the Course, with the help of assistant clerks, shall be responsible for:

1. Maintaining the event time schedule;
2. Calling together, checking in and assigning each runner to the proper race assignment;
3. Being at the starting mark promptly with the runners before each race and place the athletes in their proper positions if needed;
4. Giving needed instructions related to their event (including, method and number to score, any special course instructions before the start of each race);
5. Making adjustments in assignments with the approval of the referee when unusual conditions require a change; Note: With the new computer programs this is now often handled by the Competition Secretary since the results and the heat sheets all come together at the computer.
6. Providing the head finish line judge with an event sheet on which are listed all of the starting runners, their numbers.
7. Familiarizing themselves with all starting and finish lines and exchange zone markings for any relay events.
8. Placing all team members in their proper positions on the course for all relays;
9. Distributing batons, sashes at the start for relay races as well as collecting them from the anchor runners;
10. Enforcing the use of competitors' numbers as prescribed by meet management;
11. Enforcing uniform and logo rules at time of check in;
12. Coordinating call with the announcer;
13. Such duties as may be requested by the starter and the games committee.

To help with the flow of athletes the location for the Clerk needs to be carefully evaluated. Normally it should be away from start

so that it doesn't interfere with activities there. In a major meet it is useful to have it behind a fenced area near where the athletes normally enter the starting area. It needs to be large enough to handle the number of athletes you will be processing. It should be near the rest room facilities and the warm-up area. It should be a restricted area for athletes only. Put up signs to get the athletes to the Clerk's area. Have time schedules posted in the area. It will save answering questions. Try to have the events numbered so you can call the athletes more easily and make sure you are getting the right athletes.

### WHAT DO YOU DO?

1. When you find out you are going to be the clerk, get with the meet director or coach and go over the schedule, hopefully before the day of the meet. Make sure it is reasonable.
2. Walk the course if possible and determine where all the marks are. This should be done before the day of the meet, if possible. It is best to get with the coach and have him show you the markings if you have never been at this race. Better yet put them down on paper and have them typed up so you can easily distribute them to the starter, your assistant clerks, and the umpires. At the same time review where the Clerk area will be set up. Check what will be supplied and what you will need to supply.
3. The day of the meet, arrive early. Put up signs showing where and how to get to the Clerks area. Post the schedule of races.
4. Next walk to the start area. Go over the marks with your assistants.
5. Set up the rest of the Clerk's area. Have an area and at least one individual to check in the athletes. You will need someone to take them out to the starting area and line them up. In a bigger meets you will need someone to give instructions. Don't forget a runner to get changes to the finish line and the announcer. Good rapport with the announcer is essential. Talk to the announcer earlier so he knows what you need and you know what and when he will announce.
6. Have extra pins, numbers, and schedules.
7. At the start of most major meets the athletes will have already been pre-registered, received the preliminary schedule, and have general meet information. But at smaller meets the Clerk will end up supplying this information. When athletes arrive at course, they or coaches should check-in and receive the final meet schedule and their race numbers and or entry packet. The Meet Director should provide the Clerk of the Course with the name and numbers (if used), of all competitors entered in running or walking events. In smaller events the clerks themselves gather this information as the athletes assemble at the "clerking area". This area should be a restricted access area where the athletes are directed by the announcer for final check-in 15 minutes prior to running their race. Check in for bigger meets may need to be earlier; generally it is common to require check in a half an hour before the event. Work with the athletes to allow them warm-up time.
8. The "Clerking Area" should be kept clear of coaches, spectators, and any athletes not involved in an upcoming event. The assistant clerks can help marshals with this important task, to insure the proper atmosphere for instruction and information gathering. The clerk should confirm the presence of each athlete in person and inform them of their race, verify uniforms, and race numbers. When you give instructions, go over all the information the athlete will need to know. When can they break or what are the exchange zones. What is the color of the markings for their race? Are there any finish line procedures, use of chutes, or hand out finish position sticks? Where will the results be posted? Where do they pick up their awards? Who gets interviewed? Are there any drug testing procedures? As clerk, you are the one who informs the athlete of what is expected of him and what he needs to do. That means you need to know the answers yourself. Be prepared. Make a list before you see the Meet Director the first time.
9. When the athletes are escorted to the start line, the Clerk must allow time for the Starter's instructions, review of the commands and the positioning of all relay team members in the appropriate zones. Once the athletes are placed at the start the clerk must then report to the Referee and the Starter any

changes in the number or position of competitors resulting from absent athletes.

10. At this point the Clerk's job is finished for this race and starts the procedure or has started the procedure for the next race already. A clerk rarely gets to see a race run but is critical in getting it run on time and accurately.

#### COMPETITION SECRETARY (or SCORER in NCAA and HS):

As a result of the use of computer programs for results and video computer systems for finish line results, it has now becoming coming that the Competition Secretary now more appropriately and more easily handles some of the jobs previously handled by the clerks. The Competition Secretary at major meets now has responsibility for preparing all entrants and start lists, worksheets for use by other officials. The Competition Secretary will work closely with the Clerk of the course and the Referee in the set up of races.

#### UMPIRE:

The task of the umpire is to make a report when any competitor appears to have gained an advantage, influenced over another athlete or when the appearance of a foul has occurred. No other officiating job requires as much concentration, stamina, and knowledge of road events as that of umpiring.

From the time the starter begins the race until the finish line personnel determine the results, the umpires become the subjective interpreters of the athlete's actions. Ever alert, the umpire must know the intent of the rules of competition and their appropriate application to the situations.

It is the duty of the umpire to observe the competition closely. But the umpire is not there to find fault or to call fouls but rather to insure a fair competition. In the case of a possible foul or rule violation by a competitor or other person, the umpire is to indicate this by raising a yellow flag, if they are used. Don't wave it around. The umpire then writes down his observations and gives them to the Chief Umpire. The written report is useful for any activity, which could be later questioned or protested, even if no foul actually occurred.

Note that the umpire, even the Chief Umpire is merely an assistant to the Referee, to whom the Chief Umpire reports. As such, umpires do not have the power to disqualify or to render any final decisions. Only the Referee has that power.

#### UMPIRE COMMON SITUATIONS:

The umpire must be observant for a wide variety of possible fouls or infractions. This is an area where each rulebook has some slight differences so it is particularly important to go over the rules just before the meet to make sure you call the appropriate foul from the appropriate book. Some of the most common situations are:

Impeding or Jostling: Each competitor must stay in his or her respective position. In races the athlete must not cross in front until clear of the trailing runner. The rules require that any participant jostling, running across, or obstructing another competitor so as to impede his or her progress shall be liable to disqualification in that event. The high school rule is slightly different and requires a full stride (about 7 feet). This is the only rulebook to specify a distance, the rest specify interference with or without contact. Note generally more interference is allowed at higher levels of competition.

Relay Races: In relay race the baton or sash must be passed within the exchange zone as designated on the road, and not interfere with other team exchanges. The baton's/sash's position, not the body of either athlete, is the decisive point in determining if the exchange occurred within the zone. The baton must be carried by the hand, and if dropped must be recovered by the athlete who dropped it. The athlete may leave the course to retrieve it but not interfere with another team. The passing of the baton commences when it is first touched by the receiving runner and is completed the moment it is completely in the hand of the receiving runner only. It may not be thrown. In all cases the outgoing runner must be positioned within the zone.

Assistance: Except for assistance officially authorized and provided, a competitor who receives any assistance as defined in the respective rulebooks from any person may be disqualified by the Referee. Intermediate times and preliminary winning times may be officially announced or displayed as long as they are available to all participants. Such times should not be communicated to the athletes by persons in the competition area without prior approval of the Referee. Assistance is different in each rulebook. For IAAF (Rule 143) and USA Track & Field (Rule 66) sanctioned meets assistance is more generally defined as the conveying by any means, of advice, information or direct help and includes pacing in races by persons not participating in the race, by runners or walkers lapped or about to be lapped or by any kind of technical device. However, in USA Track & Field meets the use of a heart rate monitor or wrist chronometers are allowed. In the NCAA coaches or others may not give unofficial times/splits from the infield, at the start or finish lines or any other area designated by meet management. In general a coach, teammate, may not aid a competitor not in the race, or a non-competitor associated with the competitor's team, either directly or indirectly. This still does not allow individual splits to be called during the progress of the race (Rules 3.12.3 & 5.5). The high school rules are the most restrictive (Rule 4.5.9). The competitor cannot be aided by a coach, teammate or anyone connected directly or indirectly with the competitor or team. Such aid includes running alongside a teammate, being stationed at a point near the track, including the starting area or located near any of the field events for the purpose of aiding or coaching a competitor after the event has started. This includes the competitor using an aid during the race. However, wearing a watch during an event is no longer considered aid (1994).

#### REPORTING AN INFRACTION:

To report a possible rule infraction, which could result in a disqualification, the umpire must be able to clearly recall the circumstances surrounding the infraction to aid the Referee in his or her decision. For this reason, a written report of what was observed should always be prepared as soon as possible. The umpire should always:

1. Carry paper and pencil to record the information. A small notebook is often useful for this purpose.
2. Use the proper forms provided by the Chief Umpire.
3. Signal the Chief Umpire immediately by holding up a yellow flag at the spot of the infraction or a call on the radio.
4. Record name of the event, race, time of day, competitor number(s), team affiliation, uniform colors, and a brief description of the possible violation.

The following form is an example of an Umpire Report. The umpire should make every effort to fill out the form as completely as possible, no matter how insignificant the possible foul may seem. The Chief Umpire should always come to gather the report form and discuss your observations. The Meet Referee had the final say, unless there is a Jury of Appeals, and may or may not disqualify based on the full appraisal of the complete situation. Don't get involved in a protest unless the Referee summons you to clarify the report. The Referee and not you disqualified the athlete. Once you turn in a report put it out of your mind. Don't be offended if you call is not upheld. You may not know all the circumstances. It is your job to report what you see. Once the report is complete you have done your job. Let it go. If you can't, you will never be a good umpire.

Some general rules to remember when umpiring road events:

1. Competitors may be disqualified, but only by the Referee.
2. Competitors, who commit infractions, quite often hinder themselves as well as others.
3. Optimum locations for umpires are on curves and at the exit of relay zones unless there are enough to cover both incoming and outgoing sides of each zone.
4. The umpire's job begins the moment the race starts and ends when the finish line and position in the chute for results are complete.
5. Another athlete does not have to be touched for a violation to occur.

6. Most relay fouls occur as the runners exit the exchange zone.
7. Carefully observe runners when they may be hidden behind obstacles or in the middle of packs.
8. KNOW THE INTENT OF THE RULES UNDER WHICH THE COMPETITION IS BEING HELD AND BE ALERT.

<b>UMPIRE INFRACTION REPORT</b>		
MEET: _____	DATE: _____	TIME: _____
RACE: _____	MEN	WOMEN (CIRCLE) DIV.: _____
NAME: _____	NUMBER: _____	
UNIFORM COLOR: _____	TEAM: _____	
LOCATION OF INFRACTION: _____		
TYPE OF INFRACTION: _____		
WHO IMPACTED: _____	NUMBER: _____	
UNIFORM COLOR: _____	TEAM: _____	
UMPIRE'S NAME (PRINT): _____	SIGNATURE: _____	
HEAD UMPIRE'S COMMENTS: _____		
REFeree's DECISION: _____		
REFeree's SIGNATURE: _____		
<p>Please complete immediately after the occurrence of an infraction and turn into the Head Umpire. Signal your intent to complete a form by raising a yellow flag or calling on the radio when the infraction happens.</p>		

The minimum recommended placement of umpires is at tight places on the course or where the course can be cut. For relay races umpires should be at least at the exit of each zone.

#### THE STARTER:

Once the Clerk takes out the athletes to the start area, the Starter takes over. The following quote is taken from "Starting and Timekeeping", by Aspland and Hathway: "A good Starter must be physically and mentally alert. He should approach the job as an athlete does a race, by making sure that he is completely fit. He must have naturally quick reactions and good eyesight. He should be capable of good command, with a good clear speaking voice, and a dominant, though not overbearing personality. Self-confidence, quiet determination and patience are often called upon to meet with difficult situations that sooner or later, will arise. The Starter who panics is lost. There is no one to appeal to when difficult decision have to be made, in what is possibly the loneliest job in the athletics arena. Such decision must be made instantaneously."

The task of the starter and the recall starter(s) in cross-country is to make sure that no unfair advantage is given to any runner leaving the start line. For this reason, the starter has complete control of the competitors at the start line. The Starter is sole judge as to whether any competitor has left the start mark early or in any advantaged or disadvantaged position. The starter must also review with the competitors the start commands prior to each race. The starter normally raises the gun over his head about when the athletes are called up. False starts in road races are not normally recalled.

The starting commands are "set" and the "pistol or starting device is fired".

#### EQUIPMENT FOR THE STARTER:

Pistol (32 caliber or larger)	Sound System
Distinctive Color Hat,	Automatic System Starter
Sleeve or Jacket	
Whistle	Extra Black Powder Shells
Ladder	Spare Gun

#### PRE MEET DUTIES:

1. Inspect and test guns and FAT equipment link.
2. Inspect various starting lines, including false starting line.
3. Confer with announcer to see about introductions, calls, and time schedule

4. Confer with head of finish line to coordinate starting procedure
5. Confer with clerk about pre race instructions to avoid duplication
6. Meet with assistant starters and discuss procedures.

#### PRE RACE DUTIES:

1. Check gun and get FAT connection.
2. Clear starting area so can control starting area so competitors focus on race.
3. Give final instructions. Be Brief. For example: "Runners (Walkers) do not delay in responding to my commands. At the command "SET", I will give you reasonable time to assume a comfortable, stationary position. I will expect you to promptly come to your final position and remain motionless until the gun is fired. If for some reason this does not happen in a reasonable amount of time I will call you up and restart the sequence. Are there any questions?"
4. Next signal the finish line that you are ready to start.
5. When the finish line has confirmed they are ready then ask competitors to remove their warm-ups.
6. Take your position.
- &. Have the runners move up from the false starting line to the real one.
9. Start the race.

#### THE FINISH SYSTEM (FINISH JUDGES & TIMERS):

The suspense and drama of competition are often focused on the activities at the finish line. Here the effective coordination of the various skills and abilities of the finish officials and chute officials become evident. Officials who assign times to each competitor compliment officials who determine the correct finish order. These tasks are supervised by the Chief Finish Judge who makes the final decision as to the places of each race. In executing these tasks, it is important that each official remains alert, maintain a cool head and don't get flustered, even in the hundred meters with a blanket finish. You must concentrate and ignore any distractions such as crowd noise, announcements, other events or competitors falling before reaching the line or getting in your line of sight. The officials determining order of finish are called Finish Judges or pickers. In road races timers and finish judges can work in pairs doing select timing or complete timing depending on the primary finish system being used.

When an approved photographic/image device is used to record the finish, the picture/image must be referred to a Photo or Image Finish Panel for review. When the photographic/image device is also equipped with an approved fully automatic electrical timing device, the photo/ image should serve as the official time and place for that event. However, should the referee determine that the equipment is not operating properly, then the hand times shall be official. The new computer enhanced systems have greatly improved the finish line determinations and reduced the need for finish line officials. But they do have problems so limited finish line officials are still needed.

Two methods of timing are considered official, hand timing and fully automatic timing (FAT). A timing device, which operates automatically at only the start or finish, is not acceptable for producing official times. Hand times are taken by using either stopwatches or manually operated electronic devices with digital readouts.

At every meet an official is to be designated as Chief Timer. This official must supervise the recording of all times, immediately check that any record performances are recorded correctly, and maintain the orderly assignment of accurate times to each competitor. The officials recording times are called timers.

In many meets an official may act as both timer and a picker because of the limited number of officials available. When possible it should be done separately but picker and timer should confer and see who each picked. When there is a difference in opinion the finish judge takes precedence. Likewise the higher place official takes precedence over a lower place. If you have to

do both, concentrate on the judging. Just stop the watch and then concentrate on the athlete. If the time is incorrect or there is some problem with the timing, it will already too late to fix it and the judging is more important. Besides, it is easier to reconstruct times than it is to guess at a place. Also incorrect timing causes less controversy than incorrect placing.

To properly observe the finish, all finish line personnel should be elevated and at least 16 feet from, and perpendicular to the finish line. It is important that all finish line officials concentrate on the race. They should follow the race from the moment the competitors are brought to the "set" position at the starting line until the entire event is complete and the results recorded.

#### TAKING AND RECORDING HAND TIMES:

Timing is done from the sight of the smoke of the gun (not the sound which travels slower) until the torso of the runner hits the front of the finish line. The finish line is the vertical plane at the beginning of the line drawn on the track. The torso is that part of the body from the neck to the legs. Heads, legs and arms do not count. Let your mind and fingers do all the work. When operating a stopwatch, be familiar with all of its functions. Be there early enough to practice if you aren't using your own. Always be sure to clear the watch before the start of the next race. It is usually done only after the chief timer gives the command when he has recorded all the times from the previous race. The watch should be held face up in the palm of the hand with the index finger on the starting button. Concentrating on the starter's gun and the runners, the watch is started as soon as the smoke or flash is seen or the first runner breaks. This is different from a track race. After starting the watch, make sure it is operating. If not, or you suspect it to be incorrect, immediately notify the Chief Timer so an alternate timer can be used. Normally backup or alternate timers should be assigned for this contingency. As the runners approach, about 10 meters from the finish line, focus your attention at the finish line. As runners come down the straightaway determine the runners on either side of the place you are timing. This will allow you to focus in on that part of the race. As the runners come to the line, determine the one you are timing and look for the torso to hit the line. At that point stop the watch with your index finger. The response time at the start and the finish should compensate for each other thus giving you an accurate elapse time. Do not anticipate the finish. Once the race is complete, confer with the corresponding finish place judge and then report the time to the Head Timer. Do not clear your watch even when you have given your time in case the time must be verified again for some reason, i.e. a record, and error in recording the results or a difference in place and time sequence. The chief timer will give the command to clear your watches before the start of the next race. When reporting your time always round it off properly. Hand times on the road rounded to the next higher second, i.e. 15:01.01 is 15:02.

#### RECORDING FINISH PLACES:

The procedure is similar to that for timing. As the runners come into the straightaway to the finish area, view all the runners in sight including those just ahead or just behind. If it is close, you will need to wait till the last moment. Concentrate on the line and the color of the uniform, hair or whatever of the runner you picked. It is important that your concentration not be broken at this time. It helps if you can identify the runners at least on each side. In road races and cross-country the runners just keep coming so you have to make a fast decision and move on to the next call. If you have time, close your eyes and replay it. If it was close you may want to note it on paper if you have time or a recorder. In some meets you will need to get the competitors name or school to confirm who they are, if they are not wearing numbers. Normally do not give them a time or a place even if they ask since the positions may change as a result of a disqualification, or displacement by a missed runner. Let them wait for the official results. For bigger races, it is useful to have some kind of a stick or tag to hand to finishers if you aren't using a chute. Then have them report back to a recorder away from the finish line to record their names and place using the stick they received.

**HOW TO SET UP A FINISH LINE:** The following section will discuss the procedures and activities that you should think about or perform as the Head of the Finishline, the Head Timer or the Head Finishline Judge. The better the organization the faster heats can be run.

Get there at least an hour before the first race. Determine if there is a finish stand. Is there more than one finish line? What is the event schedule? Talk to the Starter and the Clerk of the Course and any runners if they exist. Find out if you are going to get an entry sheet, how the results are going to get from you to the Competition Secretary or announcer. Find out if you have equipment or not? Watches, clipboards, pens and pencils, flags, megaphone, whistle, stand. First get your equipment and have the area set up the way you like it. Do this before the timers and finish judges arrive. Have them report a half-hour before the first race. Often you will end up giving a short finishline clinic. You will almost always have one or more new officials who have never done this before. Be patient. It is useful to have the duties written out so they can be handed out. Spend the first 10 minutes on general items and then split them into groups. Pair up your timers and pickers. Let them know who is working with whom. Even bring nametags or something else to indicate which place they are working Try to have at least one or backup systems even if you are a backup to the electronic timing. As head judge or timer you may have to function in either capacity but try to get someone else to do it. You have enough things to do. If you have enough, name a chief timer and finish line judge. Name a recorder. If you can, have one recorder for each timer. You can choose to coordinate these functions but doing select timing or keep them separately. However if you plan to record numbers at the finish line you will need a recorder and a viewer since one person cannot both read and write at the same time. For road races having a tape recorder for places helps but you need to record times or person's names when known so that anyone using it can orientate them to where in the race they are on the tape. Continuous finish numbers although useful are very difficult to use on race day to correct mistakes. Organization is critical to the success of the finish line activities

First find out who has worked on a finish line before and who has their own watch. Assign the more experience people to be the primary finish judges. You will need several. Let people with their own watches time. They will do a better job. You normally need a minimum of 5 people, one head and 3 pickers and 2 timers. More are better but at least with this many you have a chance and will get all the positions.

Once you have named the chiefs and assigned places let the timers and the judges meet as separate groups to coordinate their activities. The Chief Timer should go over the fundamentals of timing and what is expected. It helps if each timer has a paper and pen and can write down the any missed time or place. Someone needs to count the finishers so that it is clear if the two timers are both recording the same time for the same place. A recorder is useful to record any bandit runners that get in the finish area but don't go down the chute. The problem is assuring one to one correspondence between chute position and timed place. One timer should normally be designated as the official time unless there is a problem then the other timer's results will be used.

Before the first race, make sure you have any needed paperwork. When the starter is ready, the starter will whistle to get an indication if the finish line is ready. The head will signal back if it is or not by whistling. Also it is useful to use flags to indicate with a red flag that you are not ready or a white flag if you are ready for the next heat.

Good communications between the clerk, the starter and the head of the finish line will go a long way to keeping a meet running smoothly and on time. The more information that you require the recorder or finish line officials to gather, the longer it will be between races and the longer the meet.

If there are problems, always get at least one set of results on paper. It is easier to work the rest as alternative results. If there is discrepancy, try to record as much of the other information as you can and then have someone else sort it out. If necessary, get someone else to take over your duties while you do it. But try to keep the meet moving. Remember the complainer is usually prejudiced. Ask for specific facts. Changing places on the basis of complaint should not be a normal occurrence. Only a proper picture from an automatic timing device is better than the human eye. Do not rely on instant pictures or unofficial videos. If an official video has been designated and operated then it can be used. Otherwise it is not acceptable. If there is a protest, be diplomatic. If the solution is within your ability to resolve, do so. If not, provide the protester with the channels to be followed. If the meet referee comes for information, answer any questions, providing as much information as possible. In any case, try not to hold up the meet.

Once the results are completed, give them to the runner to get to the Competition Secretary and/or the announcer.

For record purposes, no non-winning performance will be accepted as a record unless it can be verified independently (the primary timing system) that a specific time was recorded that particular runner. If that cannot be done then the next slower recorded time will be used. Hand or automatic times can be used for road records. There are no records in cross-country. Officially the IAAF does not recognize road World Records at any distance.

#### FULLY AUTOMATIC TIMING:

Fully automatic timing is a requirement for approval of a national record. We will cover how the photographic or video image is produced, how to interpret the image results, the reliability of the system and how the fully automatic timing works into the finish line operation. This is a specialty subject but is generally the same for the newer computer/video systems such as Lynx and the older Accutrack™ instant photo systems. The interpretation of the results is essentially the same although the method of generation of the finish result is somewhat different.

#### HOW AN ACCUTRACK™ PICTURE IS TAKEN:

The photographic results consist of two parts. One part along the edge is the time line. It consists of a photographic image of the time shown in dots or ticks and numbers. The timer is started by sound or special flash. When the film is moved the current time is photographed on the film. The second portion of the photographic result is the image of the finish. The image is produced by moving the film before an open aperture. When the aperture is opened an image of all that passes in front is made on the film. Figure 1 contains 6 sketches showing how a finish is imaged on the film.

#### FILM HANDLING:

The Accutrack type systems use an instant type film. Determine prior to the start of the meet who will develop the film. This may be done by the camera operator or by the reader. Make sure that the waste paper generated is disposed of properly. Film comes in black and white and color. Generally black and white film is used because of cost. Handle the black and white film carefully. It scratches easily. If the pictures are to be saved for any great length of time, use the preservative that is supplied with each packet of film. Do not apply preservative until after the meet is over and there is no need to reread the picture. Please also note that as with all pictures fingerprints can be a problem. Color film presents two very special problems. The first is the length of time required to develop and the second is a need to cure the picture. Since color film is made up of thin layers placing the film in the reader to soon cause the layers to move destroying the accuracy of the picture.

#### READING:

a. Equipment: The reader for most systems consists of a flat plate with a screw-tightened bar to hold the picture firmly and a slide indicator used to read the picture. A magnifying glass and a small light can be of considerable value in reading the picture.

The new computer stored versions allow for magnification on screen avoiding the need for this additional equipment.

b. Technique: Place the film in the reader. Do not try to read the picture without the reader unless the order of finish is clearly obvious. Most models will produce a picture with a guideline or dots to align properly. This is critical as the slide indicator reads at a 90-degree angle and if the picture is not aligned properly the interpretation will be incorrect. Place judging is done using the same rules as for hand placing. Use the torso only (See Figure 1).

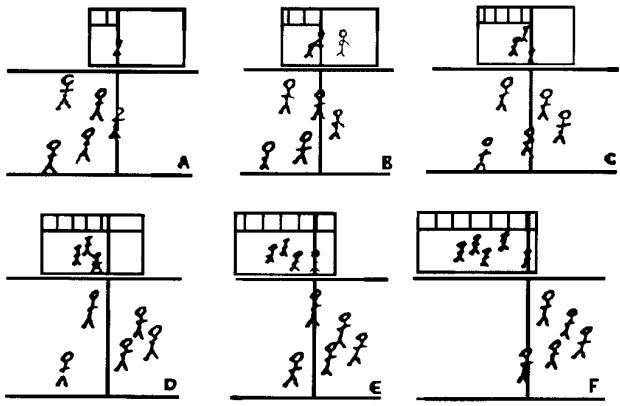


Figure 1

If the torso of an adjacent runner is completely hidden then the hidden runner usually can only have a tie. If the hidden runner were ahead, some portion of the torso would be visible. The time is recorded to the longest hundredth. Place the hairline on the edge of the torso. If the hairline is on an exact time dot then the time is for that dot. If the hairline is not on a dot move to the next dot and record the longer time. See Figure 2 for an illustration.

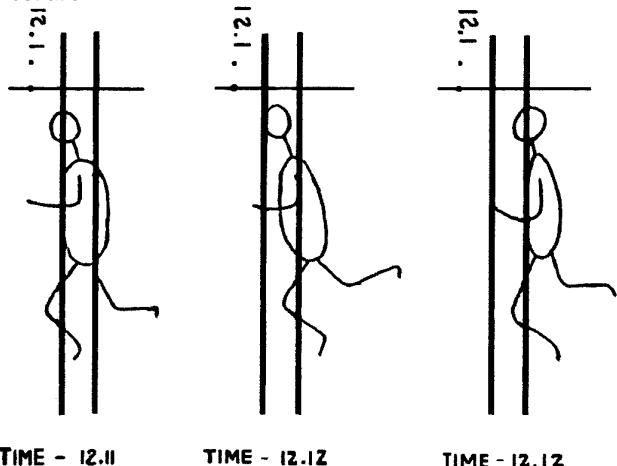


Figure 2

One problem that can occur during reading times is "parallax". It is caused when the hairline is elevated above the picture. See Figure 3 for a diagram. Check the reader for parallax before the first race. If the reader has a parallax problem, be sure to read times looking vertically at the picture. Any angle could cause a misreading of the time.

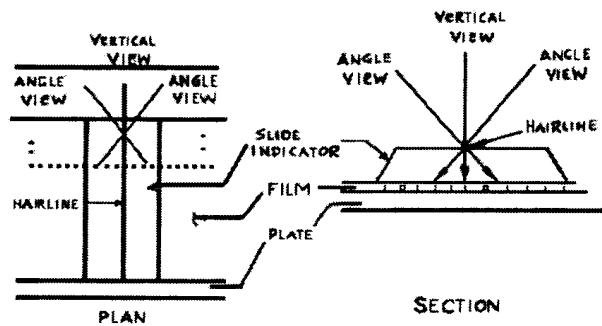


Figure 3

**RELIABILITY:**

As with all mechanical equipment fully automatic timing equipment can fail, be set-up improperly and can have operator problems. Please note that a picture of the finish will provide an absolutely accurate record of all that passes in front of the aperture. The most common problem is "no picture". In that case the hand times and places will have to be used. This is one reason why hand timing and placing is not obsolete. The next most common problem is "no time" or "inaccurate time". The "no time" problem is the easiest to solve. Hand times will have to be used. Please note that place judging can still be done from the picture. "Inaccurate time" is harder to handle. If the incorrect time is obvious then it can be treated as "no time". Coordination with the operator can help in determining whether the time is accurate. A much less reliable way is to compare the machine time with the hand times. Standard relationships exist to convert from hand to automatic timing. Other problems such as alignment of equipment, light picture, open aperture, and not enough time dots are handled best by coordinating with the machine operator.

**FINISH LINE ADMINISTRATION WITH AUTOMATIC TIMING:**

The most common method of handling the results is to include the automatic timing results on the same sheet as the hand times and places. This approach can cause problems. One of the most common problems is a missed place on the picture. Correcting the sheet can cause confusion at other points in the meet administration. The best approach in meets that do not use numbers is to use two separate result sheets, one for hand timing and one for automatic timing. In this situation the hand-timing sheet is given to the person recording the automatic times. The automatic timing sheet is filled out with the available automatic times. Hand times are used when needed to fill in the blanks and then completed sheet with hand times clearly marked is sent up as the final results. A better method is to require all athletes to use numbers. But this method takes time. Meet administrators need to add this additional time to any estimates of time for the meet. With a separate person as a photo reader versus the camera operator, the time forgetting automatic times need not be any slower than for recording hand times and certainly less if there are any problems/or missed places.

It is also common practice to give the camera operator a recall pistol so that the race can be recalled if the camera malfunctions at the start. Alternatively a flag can be raised and the starter or assistant start can sound the recall. In high school a race may not be recalled because of the failure of the automatic timing device.

**OTHER AUTOMATIC TIMING DEVICES:**

There are several computer/video systems on the market. We have several Finish Lynx systems in the Pacific Association, some of which are used for cross country or road races. Each computer system is slightly different but the basic principles are similar. A video camera is used to capture the finish on the hard disk of the computer from which it then can be played back and times either manually or automatically recorded. Reading of the image is similar to the ACCUTRACK™, but is easier since the image can be electronically enlarged and the scan line is always

parallel to the finish line. A hard copy via printer can also be made. The currently marketed systems include: 1) the Omega Hawk Eye™ which is an economical version of the Scan-O-Vision™ system used in the last few major world meets. 2) MacFinish II™ by Intersoft Electronics, 3) Finish Lynx™ and 4) Omni Sport® 6000. These systems are slightly more expensive than what ACCUTRACK™ use to cost, particularly if you have to buy the computer. But they are cheaper to operate since no film is involved. They also give a real time ability to check on the operation of the system without impacting their results; i.e. visually watch the finish. The camera is the only part of the system that needs to be at the finish line or outside of the results area anymore. There is one more system that is used particularly at a number of colleges and that is the PyroFlash system. It uses a videotape system. It is less accurate because it operates at 30 frames per minute, which means someone can cross the finish line between frames. If the runner has not reached the finish line in one frame and is over it in the next then the longer time for the frame where the runner is beyond the finish line should be used.

The latest systems on the market, which are being used at many road races, are the chip system. In this case each runner is assigned a chip, which is tied to their shoe, and when the runner goes over the reader rug it records the runner's chip number and a time. It is useful for making sure runners complete all laps in a multiple lap event or in making sure all official finishers get recorded. It simplifies the finish line. However it is fallible and you still need finish judges to make the call in a tight race. This has been born out in more than one national championship in the last few years. But the times recorded are accepted for record purposes since they are rounded out the next higher whole second anyways.