Guide For Race Directors

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HOW TO SCORE A ROAD RACE

The "pull tag system" is one of the easiest, most economical and effective ways of scoring a road race or cross country event. This system utilizes a race number, which has a detachable lower portion or pull tag. Pull tags containing pertinent runner information are collected in order of finish. Times taken at the finish line are matched to the collected tags, providing overall place and time for each finisher.

OVERVIEW

Computer Scoring. Implementation of the pull tag scoring system begins with the entry and registration of participants. Many events utilize a computer with an event management program to enter runner data and print labels and/or barcodes for entrants' race numbers. The same program is used to process collected tags, assign times and produce results.

These specially designed race management/scoring programs, designed for the specific needs of the race director, are now readily available through a number of suppliers (please call Rainbow Racing System for names and numbers of suppliers). During the entry/registration process, such a program is used to record necessary runner information and assign a number to each participant. This assigned number corresponds to the race number that will be worn by the participant. The upper body of the race number has large, readable numerals. The lower, tear away portion, or pull tag, has a smaller matching number or renumber. In addition to the renumber, the pull tag has an area for writing in runner information such as name, age and sex. There is also room for affixing a computer generated label containing that information and/or a barcode label that corresponds to the renumber.

During the event, competitors wear their numbers on the front so they are visible for scoring purposes and to allow easy removal of pull tags for collection. At the finish line, each finisher's finish time and place is recorded by a timing machine or printing stopwatch. In addition, select time teams utilize the large readable competitor number and digital time clock, or running stop watch, to record random runner numbers and times. Finishers are then funneled into a finishers' chute and kept in single file, having their pull tags collected at the end of the chute. Tags are spindled in order and taken to results processing. Tags are then matched to timing machine times and verified with select times. Once verified, runner numbers and corresponding finish times are entered in the computer. Once data has been entered, the computer scoring program does a sort and determines overall and age group award winners.

Manual Scoring. The above process may also be done without the use of a computer for scoring. Runner information taken from entry forms may be written on each tag (or through the use of typed or computer generated mailing labels). In addition, Rainbow color coding stickers are placed on the outside edge of each pull tag. The Rainbow color coding system is a unique method of marking pull tags for the sex and age group of the participant. Square stickers are used for male; oval, for female. 15 different colors are available to represent as many age groups. Stickers are applied as numbers are prepared for registration. As runners finish the race, tags are collected and spindled. Race officials are able to quickly scan the tags and identify award winners by shape and color of the stickers as opposed to reading each tag. Awards ceremonies are typically ready before the last runner crosses the finish line.

TIMING TEAMS: personnel and equipment

Primary Timing. Timing is usually done through the use of a timing machine or printing stopwatch. There are a variety of timing machines available but they are all have an internal stopwatch and printer. Standard timing machines print out a calculator type tape with 2 columns of numbers. The first column lists overall place; the second, overall time to the hundredth of second. The better timing machines have a select time feature for recording the corresponding runner number as well. Most can also download this data directly into the computer.

The primary timing team utilizes two machines for each chute being used, one is the primary; the second, the back up. The machines are started at the start of the race and the timing button or grip switch is activated as each participant finishes.

Select Timing. Select timing is the manual recording of random runner numbers and times at the finish. These recorded times are used to verify timing machine times as they are assigned to collected tags. Two person select time teams use special pre-printed sheets of paper that have spaces for entering runner number and time. As a runner approaches the finish line, one team member (the caller) reads that runner's number; the other team member (the writer) writes it down. As that same runner crosses the finish line, the caller reads the time from the overhead display clock (or a running stopwatch on his clipboard) and the corresponding time is written next to the runner number. The select time team tries to record a runner number and time every 3 to 5 seconds. Select time sheets provide periodic reference points to bring the timing machine "back on line" in the event of too many or too few times recorded by the timing machine operators.

Tape Recording. Audio and video tape recordings are a good way to protect against unforeseen problems such as dropped or mixed up tags, timing machine failures, etc. Most video cameras have an internal stopwatch that can display running time along with images, which makes for a great back up. It is best to have video operators elevated so clear shots of finishers' numbers are possible. Audio recordings are especially important at cross country events where overall place, as opposed to finish time, is most important. Audio recorders are positioned just behind the finish line and attempt to record every runner's number at the finish (remember to use the "pause" button to eliminate dead space). Tapes are used to verify that all the tags are in order prior to assigning times and posting.

People Movers. The purpose of this team is primarily to keep finishers moving through the chutes as quickly as possible. Also, they are instructing runners to tear off their pull tags and have them ready for collection at the end of the chutes. They are also charged with keeping runners in order by not allowing passing in or switching chutes. They are also watching for finishers that do not have a race numbers (unregistered runners). Each people mover carries a supply of blank tags. A blank tag is handed in and spindled (in lieu of the unregistered runner's nonexistent tag) to mark and negate the unregistered runner's time and place.

Tag Collection. This team collects the tags at the end of the chute. Tags are collected face side down and spindled that way to maintain proper order of finish. Tag collecting teams consist of 2 to 3 people per chute. A 2- person team has a tag collector and a stringer holder. Typically the collector collects up to 10 tags, lining up the spindle holes on each. He then turns to the stringer holder and they both thread the tags onto the stringer.
A 3- person team adds another collector. As collector "A" is spindling tags, collector "B" is collecting tags. Once finished spindling, "A" steps in front of "B" and begins collecting tags. Using this "leap frog" method allows for an uninterrupted flow and keeps the chute traffic moving more smoothly.
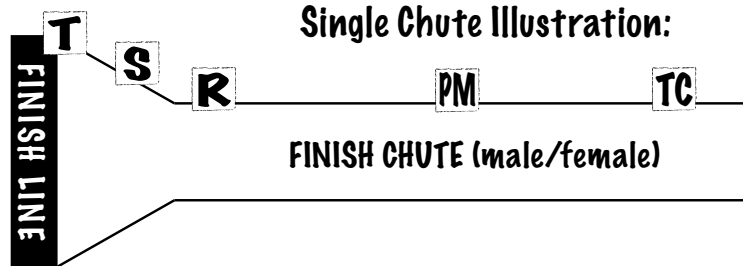
CHUTE SYSTEMS: Design and Function

Single Chute. The single chute system is the most basic. It uses all of the teams described above. The actual chute is constructed with stanchions and pennant flagging. The chute is wide at the finish line and narrows down to about 3 feet in width about 30 feet beyond the finish line. This wide, triangular shaped area is the deceleration area and allows for runners to brake before entering the narrow single file finishers' chute. Finishers' chutes are typically 3 feet wide and 50-80 feet long. Along side the finishers' chute is a workers' chute or "MOAT". This moat allows timers, people movers and tag collectors to move freely and, at the same time, not obstruct the finishers' chute.
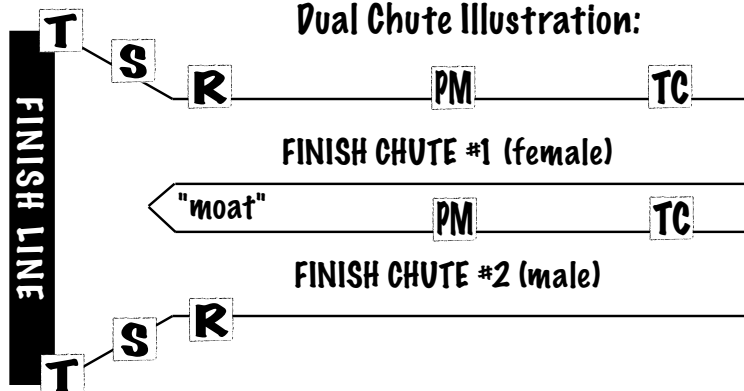
Timing Teams:

T = Timing Machines

S = Select Time

R = Tape Recorder

PM = People Movers

TC = Tag Collection
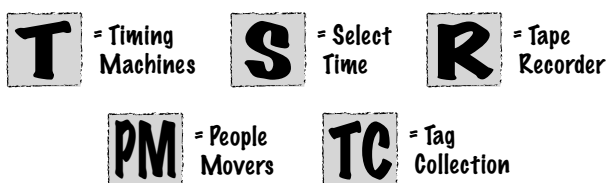
Single Chute Illustration:

FINISH LINE

T **S** **R** — **PM** — **TC**

FINISH CHUTE (male/female)

Dual Chute. The dual chute system is used to separate male and female finishers. It has the same basic design but adds a finishers' and workers' chute (moat). Typically, females are directed to the left; males, to the right. This design not only adds to the capacity of the system but also pre-separates male and female pull tags. This simplifies the awards search. In essence, two finish lines have been created, each requiring it's own timing team and worker chute.

Dual Chute Illustration:

FINISH LINE

T **S** **R** — **PM** — **TC**

FINISH CHUTE #1 (female)

"moat" **PM** — **TC**

FINISH CHUTE #2 (male)

T **S** **R**

Multiple Chute. Adding additional chutes greatly expands capacity. It also helps reduce the risk of clogged chutes and resulting back ups. Using the dual chute design, additional finishers' chutes as well as workers' chutes are added to the left (female) or right (male). As in the dual chute system, the female and male chutes act independently and require their own scoring teams. Also, a director, swing rope operator(s), and sequence tag carriers are added. The director directs the opening and closing of chutes. The swing rope operator physically open and at the same time close chutes through the use of a length of pennant flagging (swing rope) that stretches from the start of each chute to the finish line. On command, he pulls the swing rope to the left or right, closing off one chute and opening another. Sequence tag carriers carry sequentially numbered tags down each newly opened chute to establish the order in which they were open.

The director's job is to monitor the flow of runners and determine when the flow of runners is causing the open chute to show signs of backing up. He is constantly watching both the runner flow in the chutes and looking for breaks in the flow of approaching finishers. He times chute openings and closings to create the least amount of confusion for incoming finishers. At the proper time, he alerts his crew to prepare to switch to the chute he is going to open. He then hands a pre-numbered sequence tag to a sequence tag carrier and at the same time directs the swing rope to be moved, closing one chute and opening another. The tag carrier enters the newly opened chute and motions for the runners to follow him. The sequence tag is handed in and spindled ahead of the incoming tags establishing chute opening sequence. The sequence tag carrier then

CHUTE SYSTEMS: personnel and equipment (continued)

returns to the front of the chute to repeat the process. Typically, two or more sequence tag carriers are used so there is always someone ready to deliver the tags.
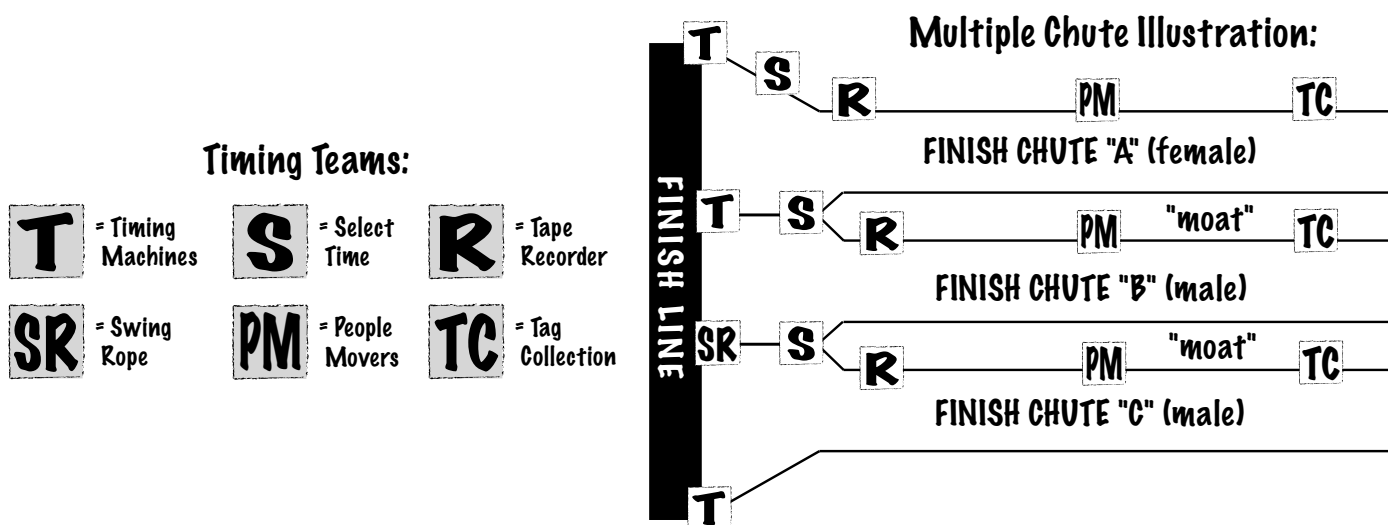
In a 3 chute system, there would be 1 female chute (A) and 2 male chutes (B and C) with a swing rope used between B and C. If B is the first chute to be opened, #1 sequence tag goes on it's stringer prior to the arrival of finishers. When chute C is opened, #2 sequence tag delivered. Then it switches back to chute B for #3 tag, and so forth. There is no need to add a new stringer for each opening of a chute since the sequence tags will mark the start and end of each group of runners. In results processing, results processors start with the chute B stringer and assign times to pull tags behind #1 sequence tag until #3 sequence tag is found. Processors then go to chute C stringer and process pull tags starting at tag #2 and tag #4, then back to chute B and pull tags between #3 and #5. The process continues in back and forth fashion until all pull tags have been processed.

In a 5 chute system, there may be 2 female chutes and 3 male chutes. The female chutes would operate in tandem fashion the same as the male chutes did in the 3 chute system. The male chutes have swing ropes between them to open and close chutes as needed. The director in this case is opening any clear or unoccupied chute as a chute fills using sequence tags to maintain correct order of finish.

In the 2, 3 and 5 chute designs, a team of primary and secondary timing machine operators, select and back up timers is used for the female chutes; another for male chutes. Common worker' chutes may be used between the finishers' chutes. Tag collection teams are required for each chute.

Timing machines are now available with multi-lane boxes. These boxes are basically signal splitters allowing up to 10 timing cords to feed into the timing machine. Each chute is assigned a timing cord and an operator. In addition to overall place and finish time, the print out will also show lane or chute number. This makes the sequencing process and assigning times to tags easier and more accurate.

Multiple Chute Illustration:

Timing Teams:

T = Timing Machines

S = Select Time

R = Tape Recorder

SR = Swing Rope

PM = People Movers

TC = Tag Collection

FINISH CHUTE "A" (female)

FINISH CHUTE "B" (male)

FINISH CHUTE "C" (male)

This has been a brief overview of the pull tag scoring system. The concepts are based on over 25 years of race directing experience and working with race directors around the world. At Rainbow Racing System, we not only produce and sell race numbers and supplies, we know how and why they work. We are here to help you make your event the best it can be.

RACE DAY PLANNING

WATER AID STATIONS

1) Use large, clean plastic barrels, lined with plastic liner bags to haul and store water (keep covered when not in use).

2) Make sure all items used to store and serve water have been sanitized. Use plastic pitchers to scoop and pour water.

3) If possible, locate water stations next to a good water source.

4) Don't skimp on cups. Use at least 9 or 7 ounce cups. Water splashes out of smaller cups as soon as they are grabbed by a runner. Also, allow at least 2 cups per runner per water station in warmer weather, as many runners will use one cup to douse themselves and drink another.

5) Use paper cups only as plastic cups make footing treacherous and slippery when tossed on the ground.

6) The number of water stations required is mainly dependent on the weather conditions; the warmer the weather, the more stations and the more water and staff required. Where possible water stations should be located on the right hand side of the road. Don't forget water at the finish, but keep it well beyond the finish chutes.

7) If both water and electrolyte replacement drinks are to be served, signage, different color cups and volunteers yelling out the contents will prevent a lot of sticky heads.

8) Instruct aid station volunteers to make it easy as possible for runners to grab the cups of water. The best way is to hold the rim of the cup between the thumb and forefinger or to position the cup on the palm of the hand. Latex or plastic gloves should be furnished and made mandatory for all water station personnel.

9) Familiarize all aid station personnel with the location of the nearest medical aid station and how to access it.

10) On Larger races, in order to keep up with the onslaught of runners, it is wise to pre-pour all or most of the cups. Do this by covering the entire surface of the table with filled cups of water. Then place a piece of clean cardboard over that layer and start another layer on top of the cardboard. Most tables will support 5 layers of cups.

11) Make sure that tables and volunteers do not obstruct the path of the runner. It is easy for volunteers to get caught up in the excitement and step right in front of an unsuspecting runner.

MILE SPLITS OR ON COURSE TIMING

Times are generally called for runners at various locations along the course. Since they are generally called at mile marks they are referred to as "mile splits". This timing is used to help the runner gauge his or her pace per mile and settle into a smooth racing rhythm. Splits are most commonly given at the one mile mark and at other key points, such as mid way, 5 mile increments, or 5K marks. All participants appreciate and expect accurate splits. There are two basic procedures for attaining this accuracy.

1) Drop off method. Timers start their watches with the start of the race, ride in the lead or accompanying vehicle and are dropped off at designated split locations along the course.

2) Radio method. This method utilizes C.B. radios/walkie talkies/cell phones at the start and the split points. The communications operator at the start area gives the operators at the split points a count down and the command to start their watches. Though not as accurate as the drop off method, this has the added benefit of having communication on the course to report emergencies, the progress of the race, etc..

No matter which method is used, make sure mile splits are in the right location as measured and are clearly marked. Timers should be advised to announce times loudly and clearly. In larger races, a megaphone or other sound system is suggested. The proper way to announce times is to say the minute at least every 5 seconds. For example: "SEVEN MINUTES!, 7:02, :03, :04, SEVEN-OH FIVE, :07, :08, :09, SEVEN-TEN..... 7:12, ..."

PLANNING YOUR EVENT

RACE DIRECTORS CHECKLIST

1) Establish race date and time

2) Pick a tentative course and get approval for location and time from authorities

3) Measure course for accuracy/certification

4) Obtain certification/TAC sanction

5) Secure insurance
(TAC or Road Runners Club of America)

6) Outline traffic control and course security plan for police and other authorities

7) Arrange for medical support, ambulance service

8) Prepare, print and distribute entry forms

9) Order race numbers and supplies

10) Order T-shirts for entrants (and volunteers)

SELECT COMMITTEE HEADS

1) Volunteer recruitment

2) Publicity and advertising

3) Entry form distribution

4) Entry form receipt, processing

5) Race number preparation

6) Registration / Check-In

7) Course Security / Safety

8) Course marking and signage

9) Water stations

10) Medical aid

11) Communications

12) Equipment transportation, set-up, tear-down

13) Timing: on course and finish line

14) Results: award ceremony and complete results

15) T-shirt distribution

16) Post race refreshments and entertainment

17) Teardown and clean up

THE NECESSARY INGREDIENTS OF AN ENTRY FORM -- A CHECKLIST

1) Name of race, sponsors, charities involved

2) Location of the event

3) Date and time

4) Course Description (could include length, map, description, certification number)

5) Services locations (mile splits, water & other refreshments, medical aid)

6) Prohibitions (could include roller skates, skateboards, scooters, bikes, etc.)

7) Awards and prizes (age group awards, random drawings, etc.

8) Entry information (fee, deadlines, late entry fee, day of race entry, limits on size of field)

9) Runner check-in / packet pick up dates, times and locations

10) Late and race day registration location and procedures

ENTRANTS INFORMATION

1) Name of entrant (last, first, middle initial)

2) Mailing address and phone

3) Age of entrant as of race day

4) Gender of entrant

5) Age group listings ("circle one" format)

6) T-shirt sizes ("circle one" format)

7) On time and late entry fee prices

8) Check to be made payable to whom

9) Address entry form and fee is to be sent

10) Waiver and release of liability
(to be signed by all entrants)

RACE DIRECTORS CHECKLIST

Pre-Race Planning	Contact/Vendor
◇ Race Date/Time	_____
◇ Course Established	_____
◇ Course Approved by	_____
◇ Course Certified	_____
◇ TAC Sanction/Ins.	_____
◇ Police Involvement	_____
◇ Ambulance Service	_____
◇ Entry Form Prep.	_____
◇ Entry Form Printing	_____
◇ Publicity/Advertising	_____
◇ Race Numbers/Supplies	_____
◇ T-Shirts (Participant)	_____
◇ T-Shirts (Volunteers)	_____

RACE DIRECTORS BUDGET PLANNER

Costs based on _____ participants

SUPPLIER	DATE ORDERED	COST
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

SELECT YOUR TEAM CHECKLIST

Position	Person In Charge	Expense Items/Supplies	Cost
◇ Volunteer Liaison	_____	_____	_____
◇ Publicity	_____	_____	_____
◇ Entry Form Distribution	_____	_____	_____
◇ Data/Entry Processing	_____	_____	_____
◇ Race Number Prep.	_____	_____	_____
◇ Registration Check-in	_____	_____	_____
◇ Race Day Check-in	_____	_____	_____
◇ Course Security	_____	_____	_____
◇ Crowd Control	_____	_____	_____
◇ Course Signage	_____	_____	_____
◇ Water Aid	_____	_____	_____
◇ Medical Aid	_____	_____	_____
◇ Communications	_____	_____	_____
◇ Equipment Transport	_____	_____	_____
◇ On Course Timing	_____	_____	_____
◇ Finish Line Set-up	_____	_____	_____
◇ Finish Line Operation	_____	_____	_____
◇ Immediate Results	_____	_____	_____
◇ Processing	_____	_____	_____
◇ T-Shirt Distribution	_____	_____	_____
◇ Entertainment/P.A.	_____	_____	_____
◇ Awards Ceremony	_____	_____	_____
◇ Refreshments	_____	_____	_____
◇ Teardown/Clean-up	_____	_____	_____
◇ Complete Results	_____	_____	_____