



Road Running Technical Council

Road Race and Finish Line Management

Note: This material was originally posted by Jim Gerweck in November 2001 in web space provided by his AOL account. Interestingly, even though Jim terminated his AOL account soon afterward, that copy on AOL's website remained online for many more years, until it finally disappeared when [AOL shut down](#) all of their "AOL Hometown" member websites on October 31, 2008. Meanwhile, as we hadn't trusted AOL's copy to remain online indefinitely, we copied it to this rrtc.net site in October 2005. We haven't copied it to the [USATF](#) site, due to the unfinished nature of this material.

Table of Contents

[Introduction](#)

[Chapter I: The Start](#)

Timing Requirements

- Watches and Timing Devices

- Official Times and Provisions for Alternate Times

- Synchronizing the Primary Timing Device

- Reporting Times from a Running Watch

- Handling Automatically Truncated, Rounded or Rased Times

- Official times when Fractions of Seconds are Unavailable

Timing the Start

- Multiple Starting Lines

- Auxiliary Watches and Digital Display Clocks

Managing the Start

- Pseudo-Starting Line

- Starting Command and Countdown

- Seeded Runners

- Starting the "Wave" Start

[Chapter II: Finish Line Theory](#)

The Ladder

- Arrival Rates and Processing Rates

Estimating Peak Arrival Rates
 Estimating Chute Build-Up
 Finish Line Back-Up
 Processing Runners in Batches
 Ideal Chute Length
 The Wave System for Handling Mega-Races

[Chapter III: Finish Line Sub-Systems](#)

Time versus Bib-Number or Name
 Manual Select Timing
 Tape Recorder
 Video-Tape Recorder
 Direct Computer Entry
 Time versus Place
 Tic Sheet Recording
 Select Timing Only
 Printing Timers
 Direct Computer Entry
 Place versus Bib-Number or Name
 Place Stick
 Place Card Only
 Place Card/Pull Tag
 Pull Tag/Spindle
 Manual Recording
 Bar-Code Reader

[Chapter IV: Design of the Finish Line System](#)

Toll-Booth versus Multi-Plex Systems
 Combining Sub-Systems
 The Pre-Finish Line Area
 The Finish Line
 Judging Close Finishes
 The Deceleration Zone
 Single Chute Operation
 Multiple Chute Operation
 Two Chute Operation
 Four Chute Operation
 Six Chute Operation
 Eight Chute Operation
 Processing Chute Design and Construction
 Processing Chute Dimensions
 Chute Construction
 Handling Interlopers and Other Problems
 Example of Finish System Design for a Large Race
 Example of a Short Race of Medium Size
 Example of a Small Race
 Example of a Really Small Race

[Chapter V: Race Registration](#)

Entry Forms

- Race Flyer Information

- Entry Blank Information

Pre-Race Registration

- registration for a Manual Recording System

- Number Blocking

- Letter Coding

- Registration for a Pull-Tag Finish System

- Peelable Pull-Tags

- Pull-Tags for the Spindle System

- Color-Coding

- Pull-Tags with Bar Codes

Packet Pickup

- Using Computers to Facilitate Packet Pickup

- Organizing Packet and T-Shirt Pickup

Late Registration

- Number Blocking and Color-Coding

- Handling Entry Fees

[Chapter VI: Award Search and Posting Results](#)

Manual Recording Systems

- Place Card Systems

- Pull-Tag Systems

[Chapter VII: Race Result Preparation](#)

- Preparing the Data

- Using Select Times

- The Select Only Mode

- Results Format

[Chapter VIII: Scoring Races By Computer](#)

- Race Setup

- Recording Times and Select Times

- Processing Results with the Computer

[Chapter IX: Verification of Performances](#)

- Types of Cheating

- Course Cutting

- Failure to Start at the Start

- Impersonation

- Course Monitoring

- Start Check-In Procedure

- Video-Tape the Finish

- Awards and Disqualification

[Appendix A: USATF Rules of Competition](#)

[Appendix B: Glossary of Terms](#)

Proceed to first section of manual: [Introduction](#)

Last revised [2001-11-22](#)