

## Timing Operations Clinic

### Instructors Outline BEFORE THE CLINIC

1. Advertise the clinic on your divisional education page as a timing operations workshop. There is no test or certification for this workshop, your division may wish to track attendance for divisional requirements.
2. Encourage attendees to bring their home gear (computer, timer and cable to connect them).
3. Gather clinic files
  - a. Clinic Instructor guide (you are reading it)
  - b. Clinic student guide
  - c. Simulation race file for SST and Vola (any race file will do, one of each flavor is included)
  - d. Simulation audio file
  - e. Simulation audio file script (has impulse queues on it)
  - f. TDTR powerpoint (clinician discretion on use)
  - g. TDTR FIS Program, download from FIS website.
4. Gather gear
  - a. Timers, as many different models as you can gather, don't forget the cables and manuals!
  - b. Start gates, as many different models as you can gather. (optional)
  - c. Photocells, same as above (optional)
  - d. Headsets...(optional)
  - e. Display boards (optional)
  - f. Start cadence - Startbeep and Startclocks (optional)
  - g. Computers for students who did not bring
  - h. Tools (optional)
  - i. Supplies (connectors, cabling, misc supplies and consumables)
  - j. Software Keys (contact Geoff Elder for SST keys or USSA for Vola keys and ask for a number to do the clinic)
  - k. Projector and clinician computer to drive it
  - l. Flash drives and/or CD's with simulation race file loaded
5. Have copies of all materials and handouts
  - a. Timing rules from ACR/ICR
  - b. FIS Timing Booklet
  - c. Start List for Simulation
  - d. TDTR (US forms and FIS Program)
  - e. Report by Referee
  - f. Electronic Timer recorder sheet
  - g. Timing Operations Clinic student handout
  - h. Timing simulation script (one copy for clinician)

### CLINIC DAY

1. Setup separate Hardware Tables for equipment. Powerstrips where needed
  - a. Timers – w/startup instructions and power supplies
  - b. Photocells and StartGates
  - c. Tools, Supplies, Misc
2. It is ok if some of the equipment is not in good repair as it is this way in the field and usually the broken parts are common trouble.
3. Setup display boards (optional)
4. setup start gate and photocell mounts (optional)

#### ATTENDEES ARRIVE

5. Welcome and Introductions – Instructors and Students
6. Questions about Student history 5 minutes
  - a. “Who has set up and synced clocks”
  - b. “Who works regularly as a TC official”
  - c. “Who has timed races”
7. How It Works, page 1. 5-10 Minutes
  - a. Description of a time of day clock
  - b. Description of a Split time
  - c. Description of Channels and input devices
8. Know Your Gear
  - a. Read the manual
  - b. Bench test all functions listed in the manual for ski racing
9. The Rules
  - a. Two Synchronized Homologated Time bases operating in TOD Mode
  - b. Homologated Start gate and Photocells
  - c. FIS Timing booklet contains additional timing rules
10. TIMERS SHOW AND TELL 20 minutes
  - a. Students divide amongst timers and attempt to start timers in TOD Mode
  - b. Timers and students are paired and teams attempt to sync and sync + 1 min
  - c. Encourage students to try unfamiliar equipment
11. Input Devices 5 min
  - a. Start Gates – description and setup
  - b. Photocells – description and setup  
Photocell Mounts  
**Protection (cheese wedges, willy bags etc.)**
  - c. Photocell Maintenance and cleaning
12. Headsets 5 minutes

- a. Wiring and setup
- b. Maintenance
- 13. Display Boards and Start Clocks min
  - a. Display Board wiring
  - b. Start horn
  - c. Start Clock
- 14. Setting Up the Hill
  - a. Protection of timing equipment and wiring
  - b. Wiring and connections
  - c. Cables on the hill and in the timing cabin
  - d. Keeping it clean
  - e. Other Connections, Serial ports, USB etc.
  - f. Announcer Feed
  - g. Internet and Live Timing
  - h. Intermediate Times
- 15. Have students break into groups and set up mock courses w/ hardware available
- 16. Timing Paperwork
  - a. Start List
  - b. TDTR
  - c. Electric time recording sheets
  - d. Report by the referee
- 17. Timing Software
  - a. Power on and connect timing computer
  - b. Open the race file
  - c. Review settings for BOTH GENDERS
  - d. Set up intervals and timing channels for BOTH GENDERS
  - e. Setup and Test Timing device
  - f. Setup and Test Display boards
  - g. Setup minimum times
  - h. Test inputs in the timing screen
- 18. Software operation – practice of techniques to address common issues
  - a. Did Not Start
  - b. Did Not Finish
  - c. False Start
  - d. False Finish
  - e. Missed start impulse
  - f. Missed finish impulse
  - g. Start out of order
  - h. Miscommunication
  - i. No Communication
  - j. Fix and Edit
- 19. Timing Simulation
  - a. Setup timers and computers so that all timers can be controlled by the clinician (daisy chain of wire to start and finish channels on each clock).

- b. Remind all attendees that this is HARD, there will be cross talk from different sources and timing blind is more difficult than when you can see the hill. Your finish line information will come from a finish controller on headset
  - c. Run the wav file and follow along with the script generating start and finish impulses as indicated on the script.
  - d. Offer some guidance with repeating of what was said and what the timers reaction should be.
20. End of a run
- a. Sending the file to the RA
  - b. Prepare Report by the Referee with timing information (DNS, DNF, NPS)
  - c. Complete TDTR for the run.
21. Wrapping up and storing the gear
- a. Cable ties (Velcro or other)
  - b. Keep it dry
  - c. Keep it organized
22. Q&A