ultralive.net

The ultralive.net runner tracking system is a free service for any trail race longer than 50 kilometers and field sizes from under 20 to over 1000 runners.

You also have the flexibility of managing multiple distance events on the same day (and course). Each race distance is designated as a separate "event" in the system while grouped together under a common "organization". An example would be having 100K, 50K and 25K races all with the same start/finish area although potentially different Aid Stations (AS). Since it was designed for races with a fixed distance, it does not work with open ended distance races (e.g. timed or looped events).

The service began in 2009 with runner tracking for the Western States Endurance Run (WSER) and has been used by WSER every year since, in addition to a growing list of added races. WSER is by far the biggest event generating over 3 million page views during race weekend. The system can handle any required demand of viewer traffic.

Runner Tracking 101

Successful runner tracking relies on two key duties: identifying a runner tracking coordinator and accurate data recording.

Runner Tracking Coordinator
Identifying a single runner tracking coordinator alleviates this detailed responsibility from the RD who will have multiple other tasks to focus on before and during the event. It also allows a single point of contact for training and coordinating volunteers and communicating with Radio Operators prior to the event.

As the RD, it is important to delegate this task to a person who is detail oriented and should be familiar with the race. The coordinator will be responsible for:
- Setup of the race with the ultralive.net administrators
- Organizing volunteers to help with tracking the runners and data entry
- Coordinating AS reporting
- Contact with the ultralive.net administrators in case of any data issues

Data Recording
Collecting the runner split data is the other key element for successful race tracking. In almost all cases, the data will be written down on some type of timing sheet (ultralive.net has examples available for download) by volunteers at pre-identified reporting ASs. Prior to the race the RD and/or Runner Tracking Coordinator must determine how timing sheet data will be transmitted to enter into the ultralive.net system. The next section (Data Collection) recommends a few proven options.

Data Collection

Runner tracking and reporting is based on accurate and timely data entry. Due to the nature of trail running the ASs can be in remote areas with little or no communication methods. There are several methods for gathering data depending on the location of the AS. All methods (except for the timing mat integration) require manual data recording prior to transmitting the splits for entry into the ultralive.net system:

- HAM Radio (voice)
- WINLINK via HAM (email)
- Direct Data Entry
- Timing Sheet photos via text
- Timing Mat Integration

HAM Radio
Many races use a HAM Radio (Amateur Radio) system for emergency communications. This network can also be utilized for transmitting runner data to Net Control (usually at the finish area). It is the most reliable method but also the most labor intensive requiring all the split data to be written down twice (at the AS and at Net Control). We do not recommend that the radio operators be involved with the actual recording of the runner splits. Their job is to relay information and they are there to be the conduit between the AS and Net Control.

WINLINK (Email over HAM radio)
This is a very effective communication method if the technology is available at the race. It requires special software on a laptop for the radio operator but the end result is an email in a specific format that makes data entry a simple copy/paste operation. If this is available to the race we highly recommend it. Please contact ultralive.net for more information.

Direct Data Entry
If the AS has internet access (either via Wifi or portable Mifi), a reliable power source (generator or electric outlet) and a laptop, the timing data can be entered directly into the ultralive.net data entry page from the AS. It is by far the fastest and most efficient method for recording runner splits from the timing sheets as it goes directly into the system and will be published within a minute of being entered. It also reduces the possibility of error with only one hand-written recording.

Timing Sheet photos via text
If the AS has cell reception and does not want to do direct data entry, then photos of the timing sheets can be sent via email or text to Net Control for data entry. This is a relatively easy method of transmitting the data without requiring any special equipment.

Timing Mat Integration

The ultralive.net system has been integrated with many different timing systems. The key to the integration is the timing mat must be able to "push" the data up to the internet so it is accessible to the ultralive.net servers to pull/read. Please contact ultralive.net for more information.

You may use multiple data collection methods during one race. For example, all of the methods described here are used at WSER throughout the 30 hours of the race. The high country has a timing mat with internet access, the canyons rely on HAM (voice) and WINLINK for communication and the latter third of the course utilizes direct data entry and HAM voice data transmission. It takes nearly 40 volunteers spread over the 100 miles course to record 6000+ splits for 369 runners.

Multiple Distances

The key to organizing multi-race events is having unique bib numbers for each distance separated by a large gap in the bib numbering. For example, the 100K runners would be #100-300, 50K runners would be #500-700 and 25K runners would be in the #900 range. If a runner changes distance before the start of the race (would not be possible mid race), they would be assigned a new bib number based on the distance otherwise it is very difficult for volunteers to differentiate between race participants.

Timeline Overview

The following provides a typical timeline for planning runner tracking for your race:

Prior to Race Day

The following actions should be led by Race Director (RD):
- Identify single point of contact for ultralive.net (Runner Tracking Coordinator). Best practices show that this should not be the RD. This person will be responsible for coordinating all runner tracking details, communicating with AS leads, and may be point of contact for HAM Radio lead.
- Identify a Net Control location if required
- Communicate race details and logistics to ultralive.net administrator
  - List of ASs, miles, etc
  - List of registered runners

The following actions should be led by Runner Tracking Coordinator:
- Confirm which ASs will be recording runner split times
    - Confirm if ASs have internet access (either already available or by using portable WiFi/MiFi equipment) or cellular service capabilities
    - Determine for each AS:
        - Will runner splits be recorded as IN, OUT or both?
        - Will time be recorded as Time of Day or Race Clock?
        - Who will record drops? AS or Net Control?
- Determine who will be responsible for recruiting volunteers for runner tracking at each AS, the AS Captain or the Runner Tracking Coordinator.
    - Assign volunteer time shifts for each AS that will be entering runner split data
    - Coordinate introductions between ultralive.net volunteers and HAM Radio Operators, if available
- Email login information to all runner tracking volunteers with manual and any other directions (*example content below*)
- Required equipment for ultralive.net
    - Computer (laptop or desktop)
    - Power cord
    - Internet

Race Day

- Start Race on ultralive.net server (Runner Tracking Coordinator)
- Confirm who started the race (Runner Tracking Coordinator)
- Update Did Not Start list (Runner Tracking Coordinator or volunteer)

ultralive.net Contact info:

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Timing Sheet Example 1:

Data Entry Sheet

Aid Station: _____   Page: /

Entry:	Bib No:	Time:		Entry:	Bib No:	Time:
1				21		
2				22		
3				23		
4				24		
5				25		
6				26		
7				27		
8				28		
9				29		
10				30		
11				31		
12				32		
13				33		
14				34		
15				35		
16				36		
17				37		
18				38		
19				39		
20				40		

Timing Sheet Example 2:

Aid Station: _____   Author:_____

Place:	Bib No:	Time:	Status:		Place:	Bib No:	Time:	Status:

STATUS CODES:
OT = Out Time DV = Drop Voluntary DM = Drop Medical MC = Missed Cutoff
Hand each page over to the HAM radio operator (to be relayed back to net control) once the page is full or every 30 minutes, whichever is shorter. Please be sure to carry over the place order on each successive page to aid in the tracking of total runners through each station.

Example email to be sent to Volunteers by Runner Tracking Coordinator

Hi Runner Tracking Volunteers,

Please forward this email to any other volunteers that may be helping you on race day.

Thank you for taking time to track this year's runners! Runner tracking plays an important role in runner safety and spectator information. This requires significant attention to detail from each of you and your teams. Therefore please take the time to read this email and linked training documents in their entirety **BEFORE** arriving at your assigned Aid Station this weekend. This includes all information you will need to be prepared for race day.

- **Required Reading:**
    - **Runner Tracking Instruction Manual** (**ADD NEW LINK**), you may want to print and bring with you race day:
- **Of interest but not required:**
    - Participant Guide: ADD HERE FOR RACE

You will use the links below to enter data into the system. Please test the login before you arrive at your Aid Station to ensure you can connect and view the data entry screen. Google Chrome is the recommended browser.
> **Webcast Data Entry: ADD NEW LINK**
> **Login for** Aid Stations Users: username: **ADD NEW LINK** / password: **ADD NEW LINK**
> **Login for** Net Control login **ADD NEW LINK**

If you have any questions, please don't hesitate to reach out to **ADD NAME** directly. My contact information is below. If you encounter any problems during the event, please call **ADD contact** for assistance. **If there is an emergency** please contact Net Control **ADD contact**.

FInally, we always appreciate feedback and suggestions for improvement of Runner Tracking and data entry as we strive for the best experience for runners and their crew. Please send any comments about our preparation before, during and after the race to me directly after the race.

Thank you again for volunteering.
Best,