



Instructions for competitors

1. Basic Information

The ToePunch system is a punching system for trail orienteering. Its key components are a unit (Toe box) and a set of seven NFC/RFID chips.



A competitor “punches” by touching a chip to a unit.

The unit confirms success of the operation by a message on the display and a light and sound signal.

2. Preparation

The Event Organizer assigns each competitor a starting number and lends him/her an appropriate chip set marked with the starting number.

Before a race, the chip set must be cleared and configured for the race by touching each chip to a Clear unit. The unit shows an identification of each chip on the display. This also checks a correct functionality of the chip set.

Don't forget to clear all seven chips in your set!

The Clear unit is usually placed in a competition center and/or at the start or pre-start.



3. Pre-Start and Start Procedures

At the start or pre-start, the Clear unit is typically placed to ensure that all chip sets are properly configured.

A race is started when a competitor touches the Start/Finish/Info chip to the Start unit. The unit saves the start time both to the chip and to the internal memory of the unit, emits an audible and visual signal and shows the current competitor's time (0:00). When the chip is touched to the Start unit later again, the current competitor's time is displayed.

The ToePunch logo on a chip must be touched as closely as possible to the ToePunch logo printed on the unit.



The same procedure is repeated later if the race is split into more parts. The next Start unit saves the second start time and shows the total competitor's time after all previous course parts.

4. Punching Answers

When the competitor wants to punch an answer, he or she selects the appropriate chip (A–E or Z) and touches it to a unit marked with the control number and possibly a category (Answer unit). The unit saves the answer, punch time and competitor (chipset) number to the internal memory, saves the control number and punch time to the chip, emits an audible and visual signal, and shows the chipset number on its display.



The competitor can hide the letter of answer printed on the chip by a thumb (or a toe).

Repeated punching of the same answer is possible after 2 seconds. However, pay attention to the capacity of the chip, which is 33 records!

If a unit does not confirm successful punching as written above, the operation should be repeated. If it fails again, a backup (usually paper card) punching should be used.

Any Punching unit can also be used for checking a competitor's time. Touching the Start/Finish/Info chip to a unit causes the unit to show the competitor's time on its display.

5. Finish and After-Finish Procedures

When passing the finish line (or the finish line of a course part), a competitor punches the Finish unit by touching the Start/Finish/Info chip to it. The unit saves the finish time both to the chip and to internal memory of the unit, emits an audible and visual signal and shows the competitor's final time.

Repeated attempts to punch the Finish unit record new finish times!

The ToePunch system offers organizers several ways how to collect and process data, so competitors should follow the pre-race information or instructions from organizers at the finish or in the event center. Toe units can transmit punching records to a server selected by the organizer, either immediately or in another regular mode. In such a case, no read-out of competitors' chips is required. However, the organizer can decide not to use this approach and to request competitors to read-out their chips at a read-out point (typically) in the finish or in the competition center. Also, a combination of both approaches is possible, e.g. for getting an instant preliminary result list immediately after finishing the race.