SWISS TIMING

TIMING & HEART RATE SYSTEM

Comprehensive Real-time Analysis

The availability of race speed and times as well as the individual physical strain of the athlete are helpful parameters to create individual training plans. The installation of several measurement points along the course ensures almost complete coverage of the area.

In addition, the software provided with the system features can divide the course in several sections (downhill, incline, even sections). This feature is of special importance when several athletes are on the course at the same time. Pre-defined sections allow the user to analyse the performance of the athletes in certain course sections.

Timing and heart rate data gathered at the measurement points are sent to a central data-processing PC. Once data are processed, they are sent to the coaches' mobile devices in real time providing valuable information on each athlete's performance.

The current physical training strain can be monitored and controlled at any given point in time. In addition, all information is stored in a personal file allowing the coach to analyse data after the training.
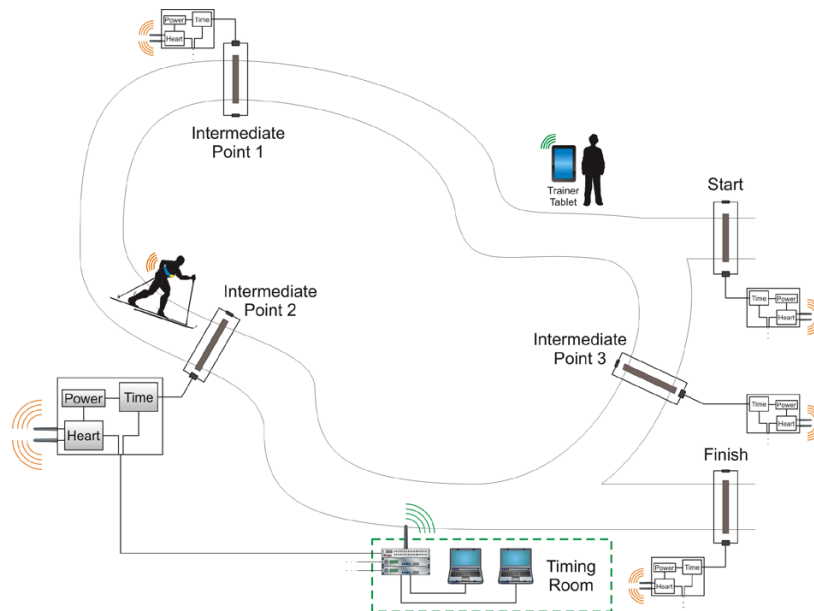
Detection loop below ice surface

Transponder

SYSTEM SCHEME

SOFTWARE COMPONENTS

Management Module
- Interface to SQL database
- Export and import of CSV files
- Athlete management (e.g. name, age groups);
- Enter heart rate profile for athletes (min. and max. values)

Setup Module
- Default configurations
- Assignment of transponders and heart rate belt to certain athletes
- Assignment of the course profile to the athlete
- Configuration of the course profile using the expert mode

Data Collection and List Printing Module
- Automatic data transfer from the measurement points
  (heart rate and time)
- Calculation and output of lap, intermediate and section times and distance covered
- Output of several lists (such as start and result lists)
- Provision of data for the online module and (if applicable) display
- Data storage in a database

Online Module
- Online presentation on a device with browser (such as tablet or notebook)
- Presentation of running times (current sector time, total time) and the corresponding heart rate of the athlete (percentage load and current heart rate)
- Filtering options

TRANSPONDER TIMING

A transponder-based timing system is supplied for measuring and presenting all intermediate times and related BIBs. Our proven transponder system is in accordance with the FIS regulations.

Transponder box features:
- Detection and decoding of the transponder signals
- Internal timer with 0.5ppm and a timing resolution of 0,002sec
- Waterproof case with connectors
- Rechargeable battery, serial data interface, 10/100BaseT Ethernet
- Detection loop with a maximum length of 16m

Transponder features:
- Active transponder activated by an electrical field
- Internal battery with 5 years lifetime or approx. 100 000 readings
- Neoprene ankle strap
- Detection height: 90cm, weight: 16g

HEART RATE MEASURING
- System compatibility: Polar W.I.N.D or Suunto
- Antenna outputs: 2

DATA CONNECTION

A server-based data center provides timing and heart rate data online for trainers and athletes via WLAN.

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