



## 5. World Championships for Rail HPVs Laupen, Switzerland



### 1. Invitation

The Swiss HPV association Future Bike and the tourist office of Laupen invites you to the 1999 event (weekend after the HPV Worldchampionships in Interlaken):

**1./2. Septembre 2001**

We can use the same rail track as in the last events which are in a good condition because they are in regulary use.

The main Rail HPV event will be the 200 m sprint for racing vehicles. We also plan some activity for utility rail vehicles like touring rail bikes or draisines.

Promoting the construction of new vehicles the **ranking list will be based on the vehicle** and not on the crew.

### 2. Contact Addresses

Please register with the secretariat Future Bike and include a description of the intended vehicle, if possible with a sketch or photo.

It will be possible to test the vehicles on the track of Laupen before the event. Please contact the office of the Sensetalbahn.

#### Registration

Future Bike CH, Jürg Hölzle  
Gwattstrasse 77 a, CH-3645 Gwatt, Switzerland,  
Tel P: 0041 33 335 31 55, Fax G: 0041 33 228 30 39  
Email: info@futurebike.ch

#### Web

[http://www.futurebike.ch/Misc/Rail/rail\\_main.html](http://www.futurebike.ch/Misc/Rail/rail_main.html)

#### Technical Questions

Theo Schmidt Ortbühl 44, CH-3612 Steffisburg  
Tel & Fax P: 0041 33 437 19 12, Email: tschmidt@mus.ch

#### Test Rides, Accommodation

Tourismus Laupenamt / Sensetalbahn  
Postfach 55, CH-3177 Laupen  
Tel G: 0041 31 740 62 75, Fax G: 0041 31 740 62 26  
Email: tourismus@laupenamt.ch  
<http://www.laupenamt.ch>

### 3. Categories

The vehicles will be divided into categories. In each one or more riders and passengers are possible.

#### 3.1. *Racing Vehicles*

These especially aerodynamic vehicles are meant to reach the highest possible speeds in sprints. The speed to beat is 63.55 km/h of Hansueli Russenberger (1998).

Vehicles allowed to race in this category must be especially well constructed in respect to safety. In particular there must be no derailing even if braking hard. The construction must therefore be adequately stiff.

#### 3.2. *Practical Vehicles*

These are meant for the transportation of people or goods, be it for touristic purposes, on private lines such as factory sidings, or for special purposes such as tidal island access or rail inspection.

### 4. Safety

#### 4.1. *Prevention of Derailing*

The track is on a raised bed of rough gravel with some H-shaped steel posts with sharp edges about 2.2 m from the track. Even though most of these should be padded, this cannot be guaranteed and therefore derailments must be avoided absolutely. Only vehicles which are very well constructed will not be subjected to a speed limit and thus allowed into the racing category.

#### 4.2. *Brakes*

The brakes should act on all wheels or on at least two wheels and the rails. They should correspond at least to good bicycle brakes and there must be a minimum of two independent systems. A parking brake (or wedges) is also required. Because of the relatively large width the distribution of braking force must be carefully considered and correspond to the vehicle's centre of mass in such a way that no large yawing moments can occur even when braking hard. This is especially important for racing vehicles and for vehicles with more than one person.

#### 4.3. *Warning Signal*

Each vehicle must carry a loud acoustic warning device.

#### 4.4. *Weight*

All vehicles must be capable of being lifted on and off the rails by the driver(s) and passenger(s).

#### 4.5. *Procedure*

All participants are required to follow the instructions of the event officials and to drive in such a manner that collisions do not occur. They must be prepared to lift the vehicle from the rails in an emergency.

#### 4.6. *Protection*

When travelling at over walking speed, helmets must be worn. The vehicles must not allow protruding limbs to touch the ground unintentionally or people to fall off.

#### 4.7. *Responsibility*

This rests solely with the constructors and drivers of the vehicles even when these are admitted to the event by the technical committee. Both the organisers and the Sense-talbahn decline any responsibility. This holds also for collisions with other vehicles or objects such as masts. These will be partially padded but this cannot be guaranteed. The level crossings will be guarded, the stretch blocked and the overhead electric line disconnected. In spite of this all participants use the stretch at their own risk and must sign a waiver to this effect.

### 5. Rail Profile

All vehicles take part in several disciplines and competitions suitable for their type. The line available is a 3.5 km stretch belonging to the Sense-talbahn (Sense Valley Railway) of which 2.5 km are practically completely level and straight. The one-track line corresponds to European standard gauge (1435 mm from rail to rail on the inside edges). Because of several level crossings only the space shown in the drawing (see last page) is available. In particular there is no space on the outside edge of the rail. If this causes difficulties with some existing vehicles, it may be possible to use a shorter stretch without level crossings. Notify us if you have difficulties with this. There are no points. There are two curves, where the rail separation increases by about 10 mm.

Gwatt, 28.1.2001