

BOB AND LUGE 1992 THE LA PLAGNE TRACK



A perfectly geometric concrete shell.

The bob and luge track which will be used for the competitions of the XVI Winter Games next winter has been built on land belonging to La Grande Plagne. Secretary-General of the FIL, Jan Steler, who designed this indispensable facility, gives details.

By Jan Steler

On a north-facing slope beside a secondary road between La Plagne and the small town of Aime lies the curving course of the Olympics bobsleigh and luge run.

The principle of using the site was approved in 1987 by the FIL and FIBT, in accordance with a plan drawn up by the Albertville'92 COJO in collaboration with the various communes on which this winter resort is dependent, grouped together as

an intercommunal association. Thus while the finish area is located in the small hamlet of La Roche at 1559.88 metres, the start of the run is to be found almost 155 metres higher. To reach the venue from Albertville you take the main road to Aime, and from there head towards Mériers on the secondary road which runs alongside the track to the start area which is sited at the last junction before Mériers, two kilometres from the winter sports resort of La Plagne.

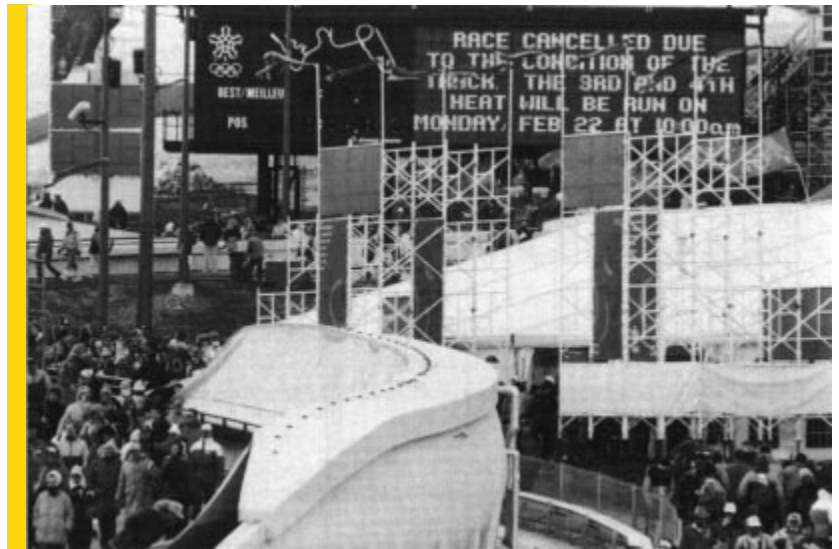
Seen from the outside, this track looks like a 1,500 metres long 15 cm thick reinforced concrete shell resting on supports, shaped like a smooth channel with elliptical sections on the bends. The geometry of the run was precisely defined and the dynamic forces resulting from the motion of the bobs calculated to take a four-man bob (630 kg). This shell is covered with a layer of fibreglass and a protective coating. Through it runs a series of water pipes used to produce the ice, and a refrigeration system similar to the one used in ice rinks except that here the technique is applied in three dimensions. Roughly four centimetres inside the concrete are tubes containing ammonia which can reach a temperature of -20°C . These tubes are grouped together in layers. Feed pipes are connected to the refrigeration plant located at the lowest part of the slope and composed of screw compressors which lower the ammonia to the required temperature, according to the meteorological conditions. For competitions and during the events, the track must be covered with 3 cm of ice at a temperature of -10°C . At other times it can be used at up to -5°C .

TIME-KEEPING AND RESULTS DISPLAY

Off the track, competitions and training sessions also require the provision of time-keeping and results display systems.

The time-keeping system (to the nearest thousandth of a second), is used for both competitions and training, enabling athletes and coaches to assess the efficiency of their techniques and performances. It is a timing and processing system which can be used to give the total time of the run and split timings at particular points of the run. It also calculates the speed of a bob or luge, and even the overall time for a whole team together with the automatic ranking of the other competitors. This data is presented to the public, together with information on the competitor or team actually on the run, by means of an electronic scoreboard situated behind

the final bend at the bottom of the run. Alongside this scoreboard, a less detailed results board displays continuous details of times achieved and distance covered by the competitor or team on the track. The basic time is supplied by the time-keeping centre located in the control tower which is also the base for the announcer who gives out via the public address system all the intermediate and final times of the event in progress and adds atmosphere to the occasion. Closed circuit video gives the control tower a permanent and complete view of the run and its condition (in use or empty). Through the use of cameras alongside the track, each of the runs can be filmed continuously, during competitions and training sessions. A lighting system installed by the



Electronic scoreboards, as here in Calgary, are indispensable.

track and along the path used by spectators can supplement the natural light available, and allows training sessions and track maintenance to be continued after dark.

DOWNHILL BOB RUN

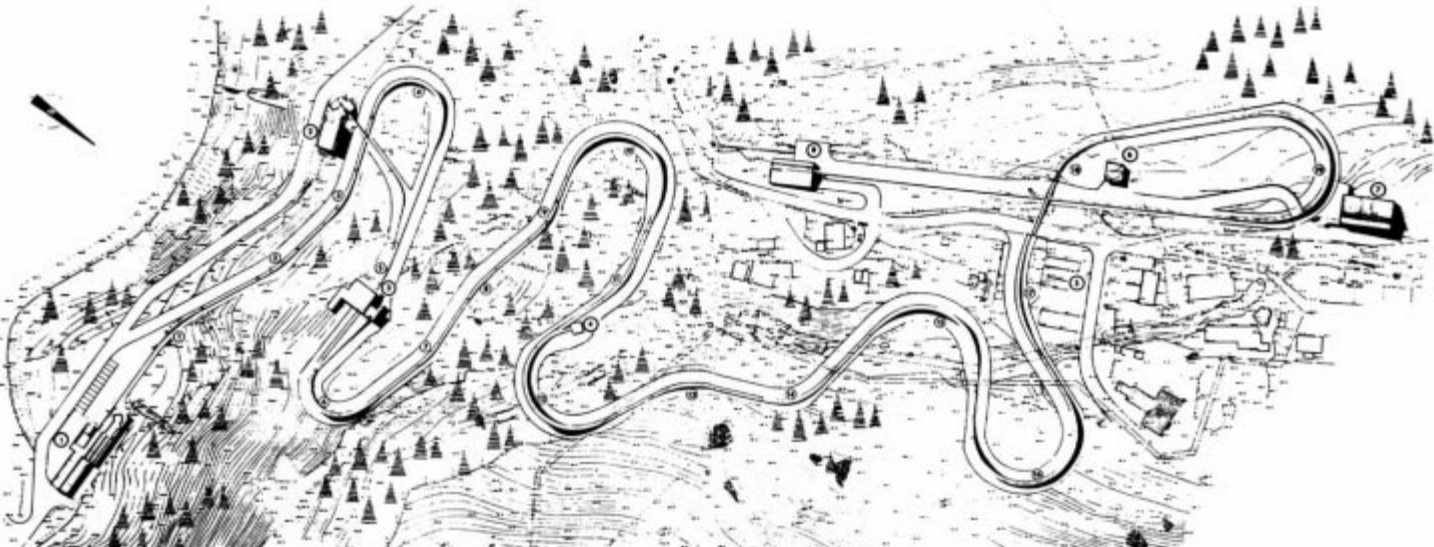
The bobsleigh events cover the whole 1,500 m of the run, with teams of two or four athletes per bob, one of whom, the

The bob track for the XVI Winter Games winds its way between La Plagne and the little village of Aime.

pilot, steers the bob. In the start area, competitors, mechanics and coaches have designated areas in which to get their bobs ready, change their clothes, rest and concentrate. Here they receive information on the run in progress and the next start numbers to go. The pilots, whose task is particularly special, can shut themselves away in a room reserved exclusively for their use. After being called by the start judge, the athletes go and look for their vehicles

park. These vehicles drive up the the start building either by using the secondary road or by means of an inner road at the end of the run.

In the start area the athletes wait for the light a few metres from the start line to turn to green. The special nature of a bob event, the level of concentration required, have led the FIBT to allow the athletes to launch themselves down the run at the



pilot, collect their helmets and go the start. The bobs arrive, either from the store (6 boxes holding a total of 36 bobs), or from the unloading area where the bob transport

moment of their choice. In contrast to the luges, they thus enjoy great freedom once the light has gone green. A flying start is used : the pilot and the athletes all push

TECHNICAL CHARACTERISTICS OF THE RUN

	<i>Bobsleigh</i>	<i>Luge: Men's</i>	<i>Ladies' and doubles</i>
Lenght	1500.00 m	1249.51 m	1142.42 m
Vertical drop	124.32 m	112.65 m	94.37 m

the bob down the start of the run before leaping inside, one after the other. During this time, in the room allocated to them, the start judges centralize all the information connected with the run (start numbers waiting, green light control), and supervise the conditions in the start area and during the run which they can watch all the way on television monitors.

After crossing the finish line, the bob is take into the scale house where the regulation weighing of athletes and equipment is performed.

SHORTER RUN FOR LUGERS

The luge competitions comprise the men's single event, on a 1249 m long section of the run, and the women's singles and men's doubles on 1142 m of the run. The junior competitions also use this second run. Situated at different heights, the start areas require two distinct sets of facilities, as the lugers have their own changing room and waiting room. Here they can leave their personal belongings which are collected by their coaches at the end of the event. An outdoor area close to the start of the run is provided for the mechanics, coaches and athletes to prepare and make any necessary repairs to the equipment. Once ready, the lugers are placed on the start of the run by the coaches. Once the light goes green, the lugers have only thirty seconds in which to set off, and a digital clock mounted on a platform next to the start shows the seconds inexorably ticking away. And the start judges must ensure that this deadline is respected. Once the lugers cross the finish line, the lugers are taken into the same scale house for the bobs where the weighing procedure is carried out.

TRAINING RUNS

A simple start platform is used for training runs on the track. This is located on the lower part of the track. However, all the bob and luge facilities are available for athletes to use for all their training sessions. Some of the technical facilities are also used in order to simulate the conditions of an actual competition. J. S.



An outdoor area, close to the start of the run, is provided for the mechanics to prepare the equipment.



The starts for bob and luge are different

