ADFC-Positions:

Bicycle Transportation in Trains

The combination of bicycles and public transport can represent an environmentally friendly alternative to car traffic on a large number of routes, with the bicycle serving mainly as a means of reaching public transportation stations. In many cases, taking a bike on the bus or train also represents a good combination - especially for day-trips or holiday travel. It can also make sense for certain commuter journeys that are made on a daily basis.

Trains are especially important for bicycle transportation; usually trains serve longer distances than trams and buses and they offer more space within the vehicle for transporting bicycles. When the DB AG (German Railway) gave its consent to the transport of bicycles in the doorway zone of trains in 1989 this doubled the number of passengers taking bikes with them. However, the transport of bicycles in the doorway zone can only be a temporary solution to make up for a lack of better specially-equipped railway coaches. But what do „bicycle-friendly trains“ look like? Is the old-fashioned „guard's van“ the solution?

Since the ADFC (General German Bicycle Club) was founded in the 1980s, it has called for an improvement in the relationship between bicycles and trains. The "Public Transport" study group discusses this topic at federal level. After initial talks with the former nationalised railway company, meetings are now held with the privatised DB AG on a regular basis. In these meetings, problems relating to bicycle transportation are discussed and solutions prepared. The opening up of the doorway zones on trains for bicycle transport and the provision of facilities for bicycle transport in InterRegio trains - which became a special feature of this type of train - are a direct result of the ADFC’s work. The present bicycle transportation capacity of German railways, however, does not nearly satisfy the demand.

In a bid to dispel the reservations that still exist with regard to bike transport on trains, we have collected the results of a large number of discussions and practical tests on different types of trains and report our findings in the descriptions that follow.

Testdrive: Klaus Daubertshäuser (left), President of the DB-Department of Local Transport, and Michael Foege, member of the Federal Board of the ADFC, examine the newly-equipped multi-purpose compartment. The ADFC not only brought normal bicycles for the test but also a tandem.
The Guard's Van

**Description:** An empty coach with open space and loading hatches (floor approx. 80 cm above the platform, no steps). It may have facilities for hanging bicycles; no noise-insulation, no heating, few windows and no special interior design. Existing types of guard's van used by the DB AG: „Dms“ and „BDomsb“.

**Functions:** Bicycles are parked close to each other. During the ride they have to be rearranged so that the bikes that are to be unloaded at the next station are nearest the door. This is why the bicycles are not allowed to be locked, and the van has to be guarded or kept locked.

**Advantages:** High capacity for a large number of bicycles with little waste of space; easy transportation of tandems, tricycles, bike-trailers and specially constructed bikes.

**Disadvantages:** Extra conductor required to load the bikes, passengers have to lift their bicycles up high to the loading hatch, no multi-usage possible (except for the transport of cargo).

**Field of service:** Transport of big groups of travelers, the need for additional manpower does not permit cost-efficient use.

The Bicycle Coach

**Description:** The bicycle coach is characterised by the existence of bike holders and possibly a number of bike-hangers, loading hatches, no noise-insulation, no heating, few windows and no special interior design. The type of coach currently in service with the DB AG: „Dduu“.

**Functions:** Bicycles have to be lifted up through the loading hatch, parked in the bike-holders and locked. The adequate spacing between the parked bikes means it is never necessary to remove other bikes in order to take one out.

**Advantages:** No extra conductor required for loading, passengers do not have to stay close to their bikes, the bicycle holders can be included in the reservation service. Sufficient space is available for tandems, tricycles and trailers.

**Disadvantages:** The presence of a conductor is necessary during boarding and alighting, passengers have to lift-up their bikes to the loading hatch, no multi-purpose-usage; this leads to less efficient utilisation of the space and lower-capacity bike parking.

**Field of service:** In local and long distance traffic usage is only economical on lines with a high demand or as an additional coach provided for group travel.
The Bicycle Compartment

Description: Holders for standing bikes, a small number of hangers, some folding seats opposite the bike racks, windows, heating/ventilation, lockers for luggage, attractive interior design, wide entrance doors (preferably low-floor-entrance, big compartments with loading doors). Existing types of coaches in service with the DB AG: „Bimd“, „Bpmdzf“, „ABbd“.

Functions: Bicycles are carried through the door by the passenger and locked in the stands. Since there is sufficient space between the stands, an individual bike can be taken out at any time without the other bicycles having to be rearranged. During the bicycle season (Spring to Autumn), the compartment mainly serves for bike transport. Some of the cyclists are able to find seats next to the bikes on the folding seats. Out of season, the folding seats offer additional seating on the train. If necessary, a relatively comfortable standing area (compared to the doorway zones) or space for baby-carriages or other bulky goods is then available. During the winter, some of the bike holders can be replaced by holders for skis.

Advantages: No additional staff necessary, out-of-season usage of the bike compartment is possible, travellers do not have to stay close to their bikes, bike-parking can be incorporated in the reservation-system.

Disadvantages: Poorer space utilisation - lower bike-parking capacity, bike holders get in the way of other uses, tandems, tricycles and trailers can only be parked in very big compartments with wide entrance doors.

Field of service: Standard for long-distance routes, in local-trains only in the form of very big compartments (bigger than half a coach) on lines with a high demand.

Optimal solution: InterCity bicycle transport wagon in summer (right: 16 bicycle-parking places) and in winter (above/below: 2 bicycle-parking places, ski-holders and additional seats).
The Multi-purpose Compartment or Multi-purpose Space

**Description:** Folding seats are located along the entire interior sides of the coach. Eyelet-type holders are available for tying the bikes above or between the seats; windows; heating/ventilation; attractive interior design; wide entrance doors (preferably low floor entrances). Existing types of coaches in service with the DB AG: „DBuz“, „Bnd“.

**Functions** The bicycles lean against each other along the folded seats and are fixed with a string or belt around them. Before the desired station, the passenger has to make sure that the bike that has to be unloaded is in front of the others. If there are only a few cyclists it is possible to sit and hold the bike. During the rush hour, the multi-purpose-compartment offers almost the same number of seats as a normal compartment but there are also (relatively) comfortable standing places. There is also space for wheelchairs, baby-carriages and bulky items. If necessary during wintertime, some of the folding seats can be replaced by standard seats.

**Advantages:** No additional staff are necessary, reasonable use is also possible by travellers without bikes. Transport of tandems, tricycles and bike-trailers is possible with the wide entrance doors.

**Disadvantages:** The passengers have to rearrange the bicycles by themselves if somebody wants to get off. There could be conflicts if passengers do not want to vacate the folding seats in order to let somebody park a bike.

**Field of service:** Standard coach for commuter trains.

The loss of seating is repeatedly put forward as a standard argument against multi-purpose compartments. This comparison shows that, in a standard-sized multi-purpose compartment 4 seating groups (= 16 seats) are replaced by 7 folding seats on both sides of the coach (= 14 seats). Folding seats of good quality are equivalent to normal seats. All the advantages of a multi-purpose compartment to satisfy a wide range of customer wishes can thus be gained at the cost of just two seats.

Why does the ADFC think that hanging bicycle-holders are not rational? The DB AG equipped two coaches with bike-hangers for test purposes, and the result was that the hanging bikes took up the same amount of space as an identical number of leaning bikes. Hanging up a bike is difficult because of the lack of space and the heavy weight that has to be lifted, all combined with the motion of the moving train can cause accidents. The DB AG and the ADFC came to the decision that it is possible to save on the additional expense of hanging bike-holders.

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