

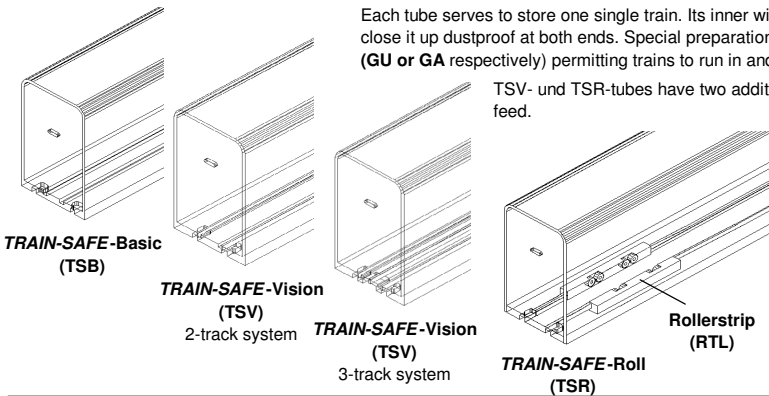
Overview of system elements

Acrylic Display Tubes

Central element of the display systems **TRAIN-SAFE-Basic (TSB)**, **TRAIN-SAFE-Vision (TSV)** und **TRAIN-SAFE-Roll (TSR)** is a tube with rectangular cross section made from high value, fully transparent acrylic. These tubes are either equipped with groove-rails (TSB) or brass-rails (TSV und TSR) to properly guide trains inside a tube. Brass-rails provide power feed to trains while stored in the tube. TSR-tubes even are prepared at one end to accommodate a roller base for locomotives allowing in-place motion of gear and wheels. For gauge H0 and smaller systems this roller base consists of two exchangeable **roller-strips (RTL)** prepared for the wheel and axle configuration of a specific locomotive. For gauge S and larger systems individual **roller-sets (RS)** are used for support of driven axles. These can be free positioned in order to accommodate a given wheel and axle configuration.

Each tube serves to store one single train. Its inner width is designed such, that trains cannot derail upon handling of the tube, and insertable caps close it up dustproof at both ends. Special preparations at the bottom side of each end of a tube allow very easy connection to **track connectors (GU or GA respectively)** permitting trains to run in and out right off the track.

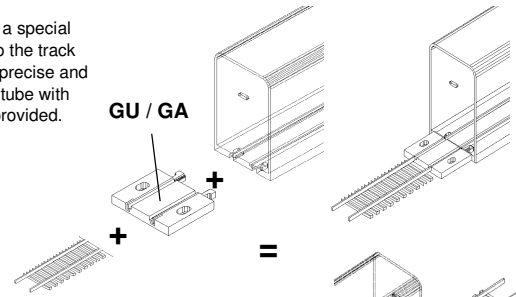
TSV- und TSR-tubes have two additional bottom side preparations permitting electric contact to wall racks with integrated power feed.



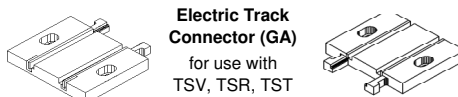
Track connectors

Track connectors are the key element for TRAIN-SAFE's unique run-in run-out funktion as they provide the direct link between a tube and the track. They are generally fix mounted onto the layout.

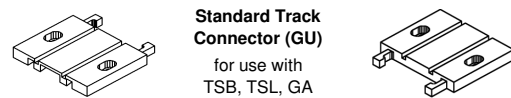
Tubes connect through a special hook and eye system to the track connectors. Thereby a precise and secure positioning of a tube with the track connector is provided.



For systems with brass rails (TSV, TSR und TST) the electric track connector (GA) is used, which upon connecting the tube immediately provides electric hook up.



For systems with groove rails (TSB and TSL) the standard track connector (GU) is used. Upon passing over this piece wheels are slightly elevated to extend that they run on the rims. This helps to save rubber lined wheels from undue damages upon pushing in of locomotives.

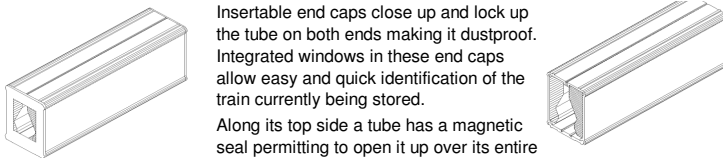


The track connector (GU) is prepared on its bottom side in such a way, that it intercepts with an electric track connector (GA) in the same way as a tube. Thereby tubes with groove rails and tubes with brass rails can be operated alternatively from the same access track.

Storage Tubes from ABS/PVC

TRAIN-SAFE-Travelite (TSL) and **TRAIN-SAFE-Travel (TST)** enable the storage and transportation of trains with ease and thereby complete the **TRAIN-SAFE-Program**.

Both products consist of shock resistant tubes manufactured partly from ABS and partly from PVC. Tubes are of a rectangular cross section and their inside is lined with a soft rubber foam bedding. Complete trains get fully embedded into this rubber foam cushion and consequently can be easily handled without being tossed around in the tube.



Insertable end caps close up and lock up the tube on both ends making it dustproof. Integrated windows in these end caps allow easy and quick identification of the train currently being stored.

Along its top side a tube has a magnetic seal permitting to open it up over its entire length. This way trains are released out of the rubber foam cushion and can move freely out of the tube.

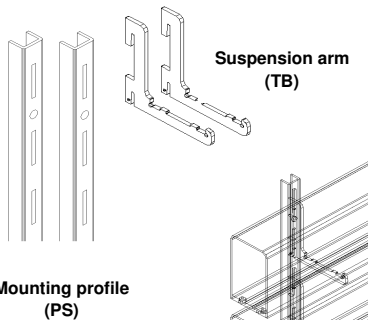
TRAIN-SAFE-Travelite (TSL)
TRAIN-SAFE-Travel (TST)

Closing up the tube is effected by simply pushing hinged side sections of the tube together at their top ends until the magnetic seal is closed.

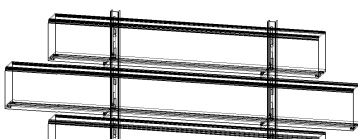
TRAIN-SAFE-Travelite's internal track is made in the form of groove rails, while **TRAIN-SAFE-Travel** tubes are equipped with brass rails permitting locomotives to move in and out of the tube by means of their own power. Special preparations at the bottom side of each end of a tube allow very easy connection to track connectors (GU or GA respectively) permitting trains to run in and out right off the track.

Stainless-Steel Wall Racks

Wall racks from stainless steel serve to store a number of tubes on a wall. Made up of mounting profiles (PS) and suspension arms (TB) as the two basic elements wall rack installations of any size and shape may be realized. Suspension arms are available for any scale of model trains, they may even be used in any combination of scales. This product is for use with TSB, TSV, TSL and TST tubes.

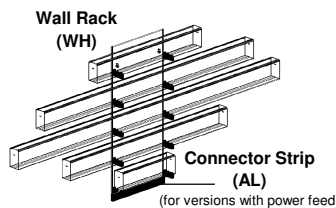


Horizontal spacing of mounting profiles is left to choice in a wide range. The minimum is always according to the shortest length of tube to be stored. It should not be less than 20% of the longest tube, however, in order to keep tubes balanced.



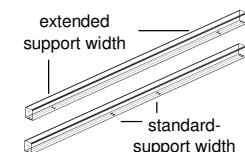
Acrylic Support Units

A choice of different wall racks, table stands, and ceiling suspensions provide a solution for perfect display of trains under almost any circumstances and in almost any environment. These products are specially designed for use with TSV and TSR tubes.



Wall racks are mounted to the wall by two screws and store a number of acrylic tubes.

For wall racks (WH) and table stands (ST) support brackets for tubes are mounted at a fix distance between one another. This distance is called a **"standard support width"**. Any acrylic tube with an "S" or with no letter at the end of the corresponding item number can be used.



Expandability:

Vertical stacking of wall racks allows the display of models in any shape an size desired - either from the start or step by step over some time. This applies for all wall racks (WH, GWH, MWH).

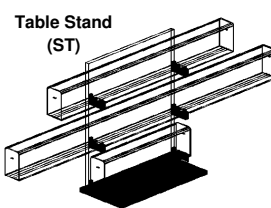
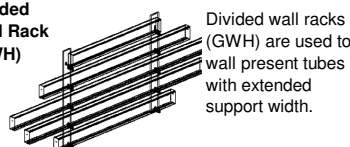


Table stands can be put up on any level surface, they store up to three acrylic tubes.

"Extended support width" (showing an "L" at the end of the corresponding item number) is useful with very long tubes having long trains inside and/or with extremely heavy locomotives in order to keep a tube in save equilibrium. Extended support width is four times of standard support width.

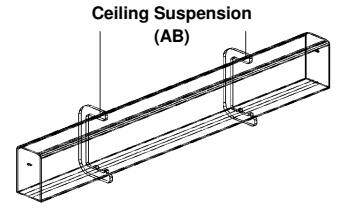
Divided Wall Rack (GWH)



Divided wall racks (GWH) are used to wall present tubes with extended support width.

Power feed:

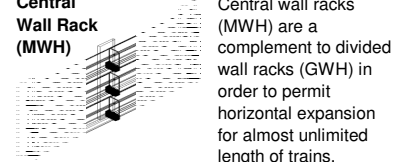
All acrylic support units presented are optionally available with an integrated electric power feed. This allows operation of train lightings or even a stationary movement of a locomotive on a roller base in a TSR tube. Electric hook up is provided best by use of a **Connector Strip (AL)** for wall racks (WH) or by use of the **Connector Cable (AK)** for divided wall racks (GWH). Central wall racks (MWH) in the electric version provide electric contact between two tubes, here no additional hook up is required. For power supply any digital control unit can be used. **TRAIN-SAFE** recommends the use of **TRAIN-SAFE-Control (TSC)** which has been specifically designed for this purpose. TSC can be directly integrated into a wall rack installation by use of the **Connector Plate (AP)**.



Suspension arms are designed for suspending a tube from a ceiling or similar, they always store one acrylic tube.

Ceiling suspension (AB) may be used with any tube, regardless if it was prepared for "standard support width" or for "extended support width".

Central Wall Rack (MWH)



Central wall racks (MWH) are a complement to divided wall racks (GWH) in order to permit horizontal expansion for almost unlimited length of trains.