



## P1311-2H Ticker tape timer

Preparation / User manual  
of the Ticker tape timer

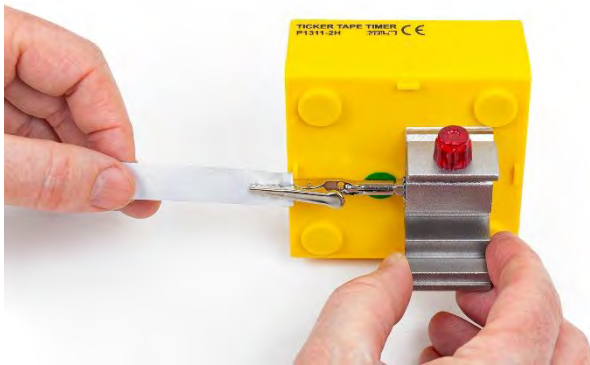


At first, we take the metallic paper roll and cut a strip about 110 cm long.

The crocodile clip on the underside of the time marker is removed from the plug pin.

One end of the metal paper strip is bent over by approx. 3 cm with the metallised (light) side facing outwards.

This end is clamped into the crocodile clip.



The crocodile clip is now plugged back onto the plug pin on the ticker tape timer.



The slider is used to attach the ticker tape timer to one end of the rail.

The uncoated dark side of the metallic paper faces upwards.



The other end of the metallic paper strip is also bent over by approx. 3 cm with the metallised (light-coloured) side facing outwards.

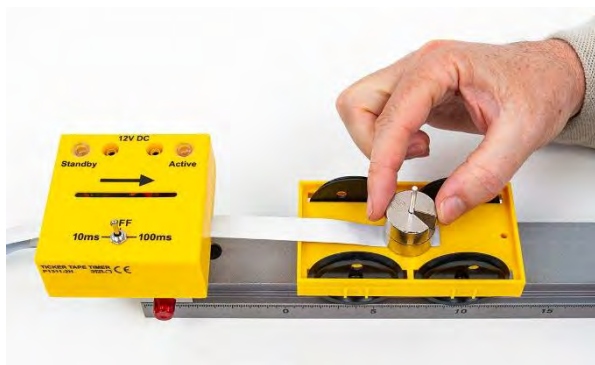
This free end is now pushed with the light side facing upwards in the direction of the arrow in the lateral guide slots through the time marker.

This can be done by using the scissors.

It must be ensured that the metal paper is not twisted:



The open end of the metal paper strip is bent back again and attached to the tower at the bending edge.



If the dynamics trolley is required to have a total mass of more than 100 g, slotted weights must be attached to the tower.

Now attach the car body.  
This clamps the metal paper in place and also stabilises the tower.



The dynamics trolley with the metal paper is pulled as close as possible to the time marker.



Before the track is tilted, a rider is clamped in front of the dynamics trolley.

This prevents the trolley from rolling away unintentionally.

## Execution of the experiment

Before starting the experiment, make sure that the metal paper strip is not blocked or twisted.

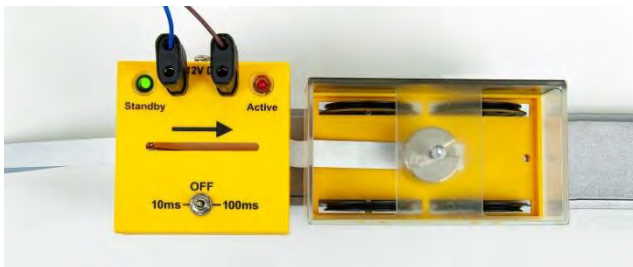
This must run unhindered through the ticker tape timer during the experiment so that friction is minimised.



Check that the toggle switch is in the 'OFF' position.

The connection sockets of the time marker transmitter are supplied with power:

Supply with 12 V AC or DC  
(4 mm sockets on the top side)



Supply with 12 V DC  
(Hollow socket on the side)

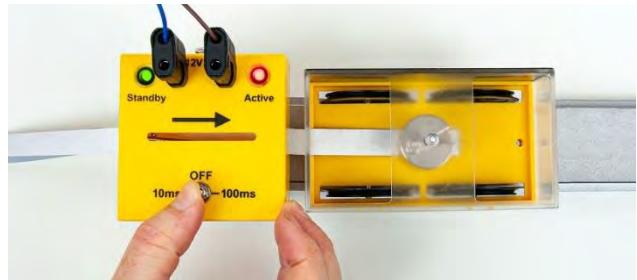


If this is the case, the green 'Standby' LED lights up.

The toggle switch is used to activate the ticker tape timer. The red 'Active' LED lights up.

Left switch '10 ms':  
For rapid movement sequences  
(e.g. acceleration due to falling)

Switch on the right '100 ms':  
For slow movement sequences  
(tests with the dynamics trolley)



As soon as the ticker tape timer is 'active', marker dots are burnt into the metal paper strip. This is done at the selected intervals, either every 10 or 100 milliseconds.

### Attention:

**After experimenting** (e.g. after the dynamics trolley has reached the end of the track), be sure to switch off the ticker tape timer again (toggle switch to 'OFF')!

### Note:

The metallic paper strip must not be bent or crumpled (except at the ends), as otherwise the metal layer may be interrupted and no marking points will be made.

The time mark intervals recommended for the individual experiments and the evaluation of the marking points on the metal paper strips are specified in the experiment manual Dynamics.