



JsTRF-TIMETABLE TUTORIAL

This tutorial is for giving practical explanations for using the jsTRF-Timetable rule in Trainz.

The tutorial does not go into all the possibilities of the rule, but gives advices on how to define timetables working, based on practical experience using the rule under TRS2006 for making several autodrive trains to follow a precise timetable order under single way track with only few crossing places.

1. Components required

First, in order to use the jsTRF-Timetable, you need to get the following components from the download station :

obviously, the jsTRF-Timetable rule and the UseTimetable driver command

| | |
|-----------------------------|-----------------------|
| jsTRF-Timetable rule | < kuid2:192081:19:1> |
| UseTimetable driver command | < kuid2:192081:100:1> |

The UseTimetable driver command will add to the driver schedule some other driver commands depending on the parameters set in the timetable, and will use :

| | |
|--|--|
| paths defined in the jsTRF-Path Control rule | < kuid2:192081:16:2> |
| PathControl_setpath driver command | < kuid2:192081:6:2> |
| Wait until not red driver command | < kuid2:192081:7:1> |
| Autodrive driver command | < kuid2:192081:4:3> |
| LoadPassengers driver command | < kuid2:192081:5:2> |
| Wait for driver command | <i>integrated in TRS2006 common base</i> |
| Wait until minute | <kuid:178892:80003> |
| Change destination sign driver command | <kuid2:206816:99003:1> |
| Schedule Library rule | <kuid2:192081:12:4> |
| Copy Commands driver command | <kuid2:192081:1:6> |
| Change train direction | <kuid2:70791:9001:1> |

You may also use the jsTRF-Path Trigger rule - < kuid2:192081:15:4> to enable dynamic path setup when passing over a trigger.

2. Proceeding principles

The jsTRF-Timetable rule is based on defining entries in a named timetable where you can setup :

- the destination to go (only by trackmark)
- on arrival, the side of the platform (on the left or on the right) to open the doors on the correct side of the train
- some commands to execute on arrival (via a copy command from the schedule library)
- optionally, a change of the train direction
- the path to setup for the next stop (only by pathgroup name)
- time to wait at current stop, either as a delay or an absolute minute time in the current hour
- some commands to execute on departure (via a copy command from the schedule library)

The UseTimetable driver command reads the current timetable entry and generates (append to the train schedule orders) the adequate driver commands to execute the timetable entry definition request. It will also insert in the schedule a new UseTimetable driver command for the next timetable entry, so that all the timetable will be executed one stop at a time.

WARNING : as the jsTRF-Timetable rule and UseTimetable driver command are based on setting up paths to next destinations and usage of autodrive command, people using the rule should have knowledge on defining path under the jsTRF-Path Control rule and using autodrive command.

You can consult the web site of jsTRF-Path Control rule to get more explanations on how to define paths and pathgroup : <http://www.js-home.org/trainz/pathcontrol/index.php>

3. Let us define a new timetable

First we need to select the jsTRF-Timetable rule and click to modify



The jsTRF-Timetable rule enables to define many timetables in the rule. Each timetable has a unique name, which will be later used to reference the timetable from the driver UseTimetable driver command.

You can also define groups to logically group several timetables under the same group name.

Tips and tricks – I define a timetable group for each pair of first departure station – final destination station and I put under this group all the various train timetables to be used on that way.



Here in the example, we have already define two timetables « Train C » and « Train B » under the group Port Ogden – NewCastle.

To add a new group, just click on `[new group]` and enter the new group name.

To add a timetable, just click on `[add timetable]`.

The new timetable is created under the name « new x » under the group Main.

To move a timetable to an other group, just click on the arrow icon on the right of the timetable name and select the group to include the timetable.

To edit a timetable, just click on the name of the timetable.

4. Editing timetable entries

When you click on add timetable, you obtain a new entry for a timetable under the group « Main », whose name is « new x ». To edit the timetable entries, you just click on its name.

So first, click on « add time table » to create a new timetable and then on its name « new x » under the group Main.



When a new timetable is created, it is empty. If you executes the UseTimetable driver command on that new timetable (here « new 6 »), nothing will happen as it is empty.

To set the details of your new timetable, you need to edit it by clicking on its name.

This will create a first empty detail entry in the new empty timetable.

You can also edit the current details for an already existing timetable.

And now, you will get the details for your timetable. As it is a new timetable, it contains only one empty detail entry.

Let's look at the different parameters of detail entry.



Each entry contains height parameters setup, which are

| | |
|------------------|---|
| destination | <i>Optional</i> Name of the trackmark for destination <i>an autodrive command to the trackmark will be generated</i> |
| open site | left or right indicates if the passenger platform at destination is on the left or on the right of the train <i>a LoadPassenger command with open and the side indicated will be generated</i> |
| copy commands | <i>Optional</i> reference for a copy commands from the schedule library to be executed on train arrival <i>A copy commands from with the reference indicated will be generated</i> |
| change direction | <i>Optional</i> if the checkbox is ticked, a Change Direction command will be inserted. This operation needs at least 2 minutes to let time for the driver to change loco. <i>very usefull at a terminus</i> |
| set display | <i>Optional</i> if indicated, a change dest sign command with the name indicated will be generated before departure. |

| | |
|---------------|--|
| wait | Time to wait can be defined as a delay can be defined as an absolute minute time in the current hour |
| copy commands | <i>Optional</i> reference for a copy commands from the schedule library to be executed before train departure <i>A copy commands from with the reference indicated will be generated</i> |
| set path | <i>Optional</i> Reference to a Path group defined in the jsTRF-Path Control rule. A command to set the path will be generated 1 minute before departure or immediatly on arrival if high prio checkbox is ticked |
| high prio | If ticked, the next path is requested as soon as the train arrived. For low priority, the path is requested 1 mn before departure. |

When the UseTimetable driver command executes, it analyse the current entry in the timetable and generates (append to the end of the driver schedule) commands to implement the timetable entry definition.

Just below are all the commands generated for an entry where all the parameters are defined.



From left to right, we will find

- 1 – Autodrive command to the trackmark for destination
- 2 – LoadPassengers with open doors on the side indicated
- 3 – Change Dest Sign
- 4 – CopyCommands on arrival
- 5 – optional Change Dir command
- 6 – wait for departure time minus 1 minute
- 7 – Copy Commands on departure
- 8 – SetPath to next destination

9 – new UseTimetable for next entry

10 – wait for departure time

11 – wait for signal not red (in fact waits for previous path setup complete)

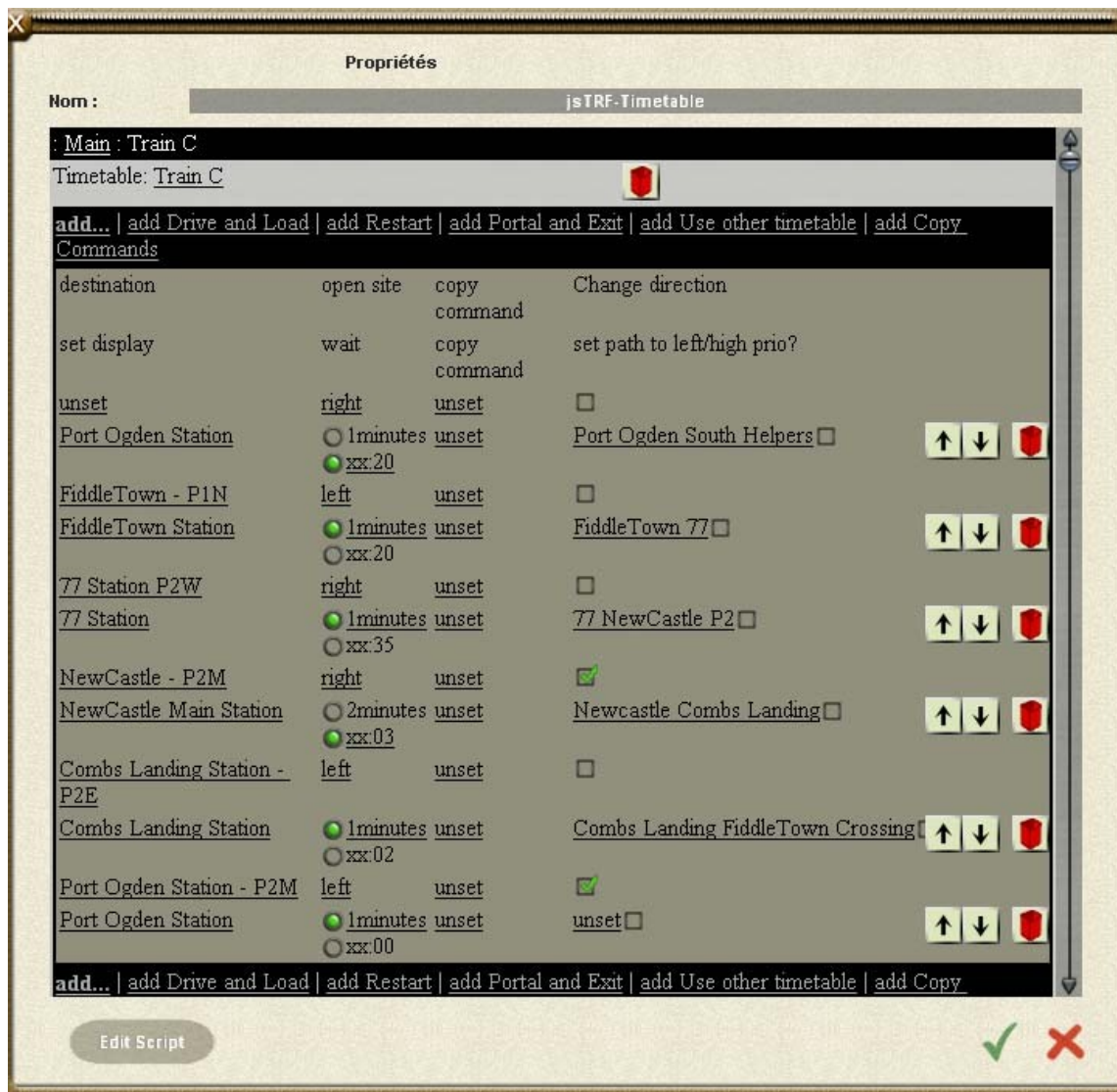
12 – LoadPassengers with close doors

Now that we have understood how the UseTimetable command works, how to use it in a practical way.

5. How to use Timetable in a practical way

Let's have a look at the example of Train C timetable.

Just below is the complete definition of Train C Timetable example.



The first entry is special because we expect for this example the train to be already at its departure platform in the correct direction, so there no destination and arrival commands to set in the first entry.

So the first entry includes only :

- the side for opening the doors
- the time to wait : here as an absolute minute time xx:20
- the path to set for the next destination : here FiddleTown station in the path group Port Ogden to South Helpers

Tips and trick

- *your first entry should take care of where is your train and initial conditions.*
 1. *if your train is already at the departure station like in the example, you should setup in the first entry only a departure time as an absolute minute time in current hour and the path from departure station to the first stop. You need also to tell if the departure platform is on the left or on the right to get the correct side doors open.*
 2. *If your train has been generated by a portal and is on its way to the first stop with already a path established to this first stop, you can directly setup your first stop entry with its trackmark first stop destination, platform side, wait time for the first*

stop and path to establish for the next stop

the next entries are more classical with

- the destination track mark (FiddleTown in the example at stop 1)
- the side for opening the doors (left at stop 1 in the example)
- the time to wait (1 mn stop in the example)
- the path to set for the next destination (in the example, path to 77 station in the path group FiddleTown 77)

Tips and Trick : I usually define a path group with a name including the station origin name and the station dest name. The group includes all the paths from all origin station platforms to the same destination station. If the destination has several platforms, you need to use the pathtrigger rule and a trigger on the destination way to set the path to the right platform based on the trackmark destination.

For more details, consult <http://www.js-home.org/trainz/pathtrigger/index.php>

And we repeat the process for each stop until arriving at the terminus : in our case the third entry Newcastle main station.

You can notice that the checkbox for changing train direction is ticked for this entry and that the departure time is set to an absolute minute time, in that case xx:03. And you get as usual a path to go to the next stop on the way back.

The final thing to notice is the last entry which is the arrival to final destination (in that case it is a come back to the departure station platform, so that we can loop ...). The last entry has the checkbox for changing the direction of the train ticked, has a wait delay but no new path to be set.

To loop, you can either use the add Restart link to include a restart entry to the same timetable or add use other timetable link to switch to an other timetable.

The buttons on the right enables to delete a detail entry or to move up or down an entry. To add a new detail entry, just click on Add Drive and Load link.

We have looked at the « Add Drive and Load » command, but there are some other options in the jsTRF-Timetable rule.

You can use the « Add CopyCommands » which will insert a detail entry including only a destination and a CopyCommand on arrival.

You can use the « Add Portal and Exit » as the last entry for a train leaving through a portal.

Tips and trick synthesis :

- *for your first entry*
 1. - *if your train is not generated by a portal*
 - *bring the train to its departure station platform either manually or by other driver commands*
 - *have a timetable with the first entry only to define departure time, side of departure platform and path to the first stop*
 2. - *if your train is generated by a portal*
 - *set a path to the first stop in the driver schedule*
 - *then insert a UseTimetable with a timetable with no special first entry*
- *have as many additional entries as you have intermediate stops. You can request a change direction at some stops.*
- *At the final destination, leave unset the next path.*
- *If you need to recycle the train schedule, use the restart option entry definition or the use timetable to reference an other timetable.*
- *If your train leaves via a portal, use « Add portal and exit » command entry.*

Other tips and trick and advices

- remember that the driving is based on Autodrive command to a trackmark after setting a path to destination. Check your paths and verify the destination trackmark is on the path wich has been setup, or your train will go elsewhere ...
- when using wait time with absolute minute in current hour, verify that your train will arrive to destination in every cases before departure time with a margin of 2 to 3 minutes or more. If your train arrives too late, and miss the departure time, it will waits one hour for next departure time ...
- As the system request a path only at departure time for the next destination, if two trains with intersecting paths have timetables very close with waits based on delay, you will not be sure which one will be the first. If the order is important, prefer to use absolute minutes for departure time with some margin to be sure train will not miss the departure time. In that way, you will be sure of the path request order wich happens 1 minute before departure time for a train.
- check the correct side for opening doors or you will open the door on the wrong side often on double track on the other track. Not good for passengers safety ...
- if you have selected a « timetable controlled train » as current camera target, then if you press the k key, a new browser window will open giving details about the operations. You can see the different paths allready established and the ones waiting in the queue. If you select the « drive ... » item, you will get an option for manual driving under the autodrive command ...

And now, good luck with your timetables and have fun.