Timetable Error Messages (Rev 2: May 2020)

It is generally agreed that compiling timetables and having them successfully validate is the most difficult aspect of the Railway Operation Simulator. This note provides help with error messages received when trying to validate a timetable or when trying to load an invalid timetable. It assumes that the user is reasonably knowledgeable about timetable structure and syntax, but if not then the user manual provides detailed information and the timetable tutorials provide experience in compilation (these are available under the website 'Download' tab).

Internally the program translates the timetable compiled by the user into a series of machine-readable train instructions, and these must be precise and valid, or the program will crash or behave improperly in some way. For this reason there are many checks during timetable validation, and any error or inconsistency, however slight it might seem, causes validation to halt with an error message. The message given relates to the failed check, and it provides as much information as it can about the check and where in the timetable it failed, but that may not always be as helpful as might be wished in identifying the timetable error that caused it. Therefore when an error message is given it tells you that there is an error present, but the message itself should be regarded as a guide as to what the error might be, and if a service reference is given it tells you that it involves either that service directly or one that is linked to it.

A few very common errors are as follows:-

Have you misplaced any semicolons? If this is the case when you validate the timetable it should point you to the misplaced character

Ensure if a service starts at a station that it has a single time (departure), that intermittent stops have both an arrival and departure time, and the final location is either an exit track element, or a final station with single time (arrival time) only.

Are all times in your timetable chronological? It is easy to make a mistake and miswrite an hour or minute in a time entry.

Is the station name spelt correctly? It could be that the title you used for the station on the map does not match the one you entered on the timetable itself. Check using the dropdown box in the timetable editor.

If you have a timetable error and this note doesn't help in correcting it please post the offending timetabled service on Discord in the 'helpdesk' channel and someone is sure to assist.

A few points to note:

1) The timetable only applies for trains under timetable control. Trains under signaller control are directed by the signaller.

2) In most cases two separate error messages are given for a particular error. The first gives the type of error and the second shows the service to which it applies.

3) For brevity the text of error messages only refers to headcodes (train reporting numbers), whereas strictly speaking they are service references, where a service reference consists of either a headcode on its own or a headcode prefixed by up to four other characters to allow different services to be uniquely specified but have the same headcode.

4) Timetable validation is a very detailed process. Checks include the validity of the general structure - e.g. that a start time is provided, that at least one service is specified and so on, and that each service is correctly specified in isolation. Linked service checks ensure that all services that link to other services have the correct links, that times and locations are

specified, and that every link reference is unique and occurs only once, except for shuttles with feeder and/or finishing services when the shuttle link reference occurs twice.

5) In the following listed error messages:

'xxxx' and 'yyyy' are used to refer to service information (headcode or service reference) which is provided explicitly in the received error message;

'zzz' is used to refer to an event, i.e. a train action such as a timed arrival and departure or an action denoted by a code such as Snt, Sns, cdt, jbo etc. The actual event is provided explicitly in the received error message;

terms in italics such as *'train information'* represent information that is provided explicitly in the received error message.

6) Error messages are listed below in two sections, each in alphabetical order*, the first section listing errors involving the general structure or a single service; and the second listing those that involve two or more (only shuttles have more than two links) linked services. In each case advice is given as to what the cause is likely to be (some that are considered self-explanatory are omitted).

*Services denoted by xxxx or yyyy and events denoted by zzz are listed in x, y and z order, not in the order of the actual service or event, which vary according to the codes used.

Errors involving only a single service or none at all (one or no headcode given)

Error in repeat: xxxx - should be 'R;m;d;n'

A repeating service must include 'R;m;d;n' as the last line of the service, where 'R' is the 'repeat' command, 'm' is the interval in minutes between repeats, 'd' is the increment in digits between repeats (any number from 0 to 99), and 'n' is the number of repeats - for example if n = 1 then there will be two services in all, the original and one repeat.

Error in timetable - a finish event must be either the last or last but one for xxxx

The service appears to have a finish event (i.e. a command beginning with 'F') that isn't the last, or if there is a repeat command, the last but one.

Error in timetable - a location entry appears twice inappropriately for: xxxx

A duplicated location error is normally found quite easily by examination of 'xxxx'.

Error in timetable - a location event for a timed arrival [or a timed arrival and departure] is the same as the earlier departure location for: xxxx

The validator doesn't allow a train to arrive at the same location that it departed from earlier.

Error in timetable - a location event for a timed departure is different from the arrival location for: xxxx

A train appears to depart from a different location than it arrived at.

Error in timetable - a location event is inconsistent for: xxxx & zzz

This error normally occurs when two different locations are specified when they are expected to be the same, or the same when they are expected to be different. Check through the events for service 'xxxx', and look for event zzz. This should reveal the inconsistency.

Error in timetable - a repeat entry time exceeds 95h 59m, see service xxxx

The timetable can handle events of up to four days (96 hours), so the validator checks the times for all repeat entries and gives this error message for any that would exceed 95 hours and 59 minutes. Reducing the number of repeats to stay within this limit should correct the error.

Error in timetable - a timed arrival and departure has too early an arrival time for: xxxx

Check all arrival times for the service. One or more may be earlier than the last scheduled time, or earlier than the timetable start time.

Error in timetable - a timed location event has a time that is too early for: xxxx

Check all times in the relevant service. One or more may be earlier than the last scheduled time, or earlier than the timetable start time.

Error in timetable - a train event has a time that is set too early for: xxxx , may be before timetable start time.

Check all event times in the relevant service. One or more may be earlier than the last scheduled time, or earlier than the timetable start time.

Error in timetable - a zzz is followed by an illegal event for: xxxx

This is a common error where the reason is almost always due to a mix-up of departure times, arrival times, and locations for the service, the illegal event being for example a stopped train being followed by an arrival. Check carefully all through the service, noting at each point whether the train is moving or stopped. The following points should be noted:

- A train that starts at other than a named location is treated by the program as moving, even if its starting speed is zero, because it will begin to accelerate as soon as it appears unless stopped at a signal;
- A train stopped at a signal is treated by the program as moving, because as soon as the signal clears it will move;
- A train that starts with a non-zero starting speed is moving, whether or not it starts at a named location;
- A service entry with a time and a location such as 14:53;Crewe may be an arrival or a departure depending on the state of the train (stopped or moving) when this point in the timetable is reached. During your check be sure you know which it is and that it is consistent with earlier events;
- A service with two times and a location such as 17:19;17:25;Crewe is an arrival followed by a departure. Before such an event the train must be moving or the error will be given.

Error in timetable - can't find any named location elements at '*location*'

There must be at least one track element in the railway with this location name (i.e. a track element next to a platform or at a non-station named location) or this error message is given. The most common reason is that one or more named concourse elements are present but no platform elements, or non-station named location elements not overlying any track elements.

Error in timetable - can't find timetabled location '*location*' in railway

This error occurs when a name has been used in the timetable but is not present in the railway. Check the dropdown box in the timetable editor which lists all named locations and ensure that the one in the timetable is one of them. The most common reason for this error is a spelling mistake.

Error in timetable - continuation names '*name*' must not be included, see service xxxx

This error occurs when the name of a continuation is used in a timetable. Continuation names can't be used in timetables because trains don't stop there, they only stop at timetabled locations which are listed in the dropdown box in the timetable editor.

Error in timetable - entry incomplete: see '*text*'....

There is a service partly defined but some of it is missing, the error message shows the service and the incomplete text.

Error in timetable - F-nshs (shuttle link) must be the last event for: xxxx

This event is 'Finish non-repeating shuttle feeder service', i.e. it is the last event in a shuttle feeder service. It appears that there are one or more events after it, probably a repeat, but repeats aren't permitted for feeder services. Make sure this is the last event for the service.

Error in timetable - headcode missing before 'Sfs', 'Sns', 'Sns-sh' or 'Sns-fsh' start.

It seems that the headcode (or service reference) has been omitted for this service.

Error in timetable - information additional to a headcode & optional description given before 'Sfs', 'Sns', 'Sns-sh' or 'Sns-fsh' start event: zzz

This error is usually given when train information - start speed, maximum speed, mass etc are provided but they aren't needed in these cases, all this information is extracted from the corresponding linked service. Make sure that the first line consists of the headcode and optional description only.

Error in timetable - last event in a continuation shuttle service (i.e links back to a shuttle) whose headcode is xxxx is not 'Fns', 'Fns-sh' or 'Frh-sh'

A continuation shuttle service is a service that follows on from an earlier shuttle service. The last event for this service (i.e. the event immediately before the repeat command) is expected to be one of the listed finish events, but it is something else. An appropriate finish event is required.

Error in timetable - last event in shuttle service xxxx is not 'Fns', 'Fns-sh' or 'Frh-sh'

A shuttle service can only have one of the three listed finish events as the last event before the repeat command. An appropriate finish event is required.

Error in timetable - last event should be a finish: zzz

zzz is the last event but it isn't a finish (i.e. one with a code beginning with 'F'). An appropriate finish event is required.

Error in timetable - location too short to split a train at *'location'*

When a train splits both trains must lie adjacent to at least one platform element so there must be at least two platform

elements together for the two trains. However if there are two platforms but one of them is at a buffer then there still won't be enough room for the two split trains. Also, if it is possible for other trains to be at the platform when a split occurs then those trains will further restrict the space available. The timetable validator won't pick up the possibility of there being other obstructing trains but if it can occur then make sure that the platform in question is a long one. If your timetable includes split trains it is best to ensure that relevant platforms are quite long.

Error in timetable - no location departure following an 'Sfs', 'Sns', 'Sns-sh'or 'Sns-fsh' event for: xxxx

This is normally caused by confusion between moving and stopped trains. All the above listed events occur at a named location with trains stopped. Therefore the first movement must be a departure.

Error in timetable - service must have a start event and at least one other for: xxxx

When this error occurs the timetable validator has already established that the service is not signaller controlled (in which case there can be just a start event), so either there must be other events or the service should be signaller controlled.

Error in timetable - Service xxxx has an event that references itself

Linked services involve cross references, i.e. each service references the other service. In this case it seems that a reference is included to the service itself rather than to the linked service and this is not permitted.

Error in timetable - shuttle connecting train xxxx shouldn't have a repeat

Shuttle connecting services (feeder or finishing) can't have repeats, but it seems that a repeat command has been specified for this service.

Error in timetable - shuttle train xxxx does not have a repeat

All shuttle services (not shuttle connecting services) must have at least one repeat, or the service does not need to be specified as a shuttle, a simple 'Snt' service ending in 'Fns' would suffice for the first service with a 'Sns' service for the second.

Error in timetable - 'Snt' or 'Snt-sh' event at stop location but start speed not zero for: xxxx

This error is given when the train in question starts at a location and there is a departure event from that location in the timetable. In this case the train must be stopped so the start speed must be zero.

Error in timetable - 'Snt-sh' event not at stop location for: xxxx

A new shuttle service must begin at a location but it seems that this service is starting without being located.

Error in timetable - the last event before the repeat must be a finish for xxxx

The service appears to have it repeat command preceded by something other than a finish event - i.e. a command beginning with 'F'.

Error in timetable - the only event that can follow a train created under signaller control is a repeat, see xxxx

The service appears to have a service created under signaller control (i.e. 'S' follows the track element locations in an Snt command - e.g. 08:15;Snt;46-12 47-12;S) with later events other than a repeat.

Error in timetable - there appear to be no train services in the timetable, it must contain at least one

It seems that the timetable has no services. If the file is expected to contain services then it may be that although a start time has been specified there is a blank line before the services begin. The validator regards a blank line as the end of the timetable. Or, perhaps all the services have been preceded by '*', which the validator regards as comments.

Error in timetable - train information incomplete before 'Snt' or 'Snt-sh' start event: '*train information*'

Something is missing in the train information, which is the first line of the service. Information should include: Service reference (where the headcode is the last four characters), Description, Start Speed, Maximum Speed, Mass, Maximum Brake Rate, & Power.

Error in timetable - unable to find a corresponding split train event for the train that starts from a split whose headcode is xxxx

An 'Sfs' event has been found in the timetable, i.e. new service start from split, but there doesn't seem to be a corresponding event in another service that tells the train to split, i.e. an 'fsp' or 'rsp' event. Check service xxxx and find the service that is referenced (e.g. if the 'Sfs' entry is 14:12;Sfs;3F29 then the referenced service is 3F29). Then check that service, it should contain a split event 'fsp' or 'rsp' but apparently there isn't one.

Error in timetable - unlocated 'Snt' not followed by 'Fer', 'pas' or an arrival for: xxxx

Unlocated 'Snt' means that the train is regarded as moving even if its start speed is zero (it will start to accelerate immediately or as soon as a holding signal clears). As such it must be followed by 'Fer' - Finish exit railway; 'pas' - pass a named location; or a named location arrival (or arrival and departure), but it seems not to be.

Error in timetable for xxxx: an event should have had a location name associated with it but it could not be found

Here an event that should be associated with a named location is present in the timetable (arrival, departure, change of direction, split etc.) but there doesn't seem to be such a location specified. Sometimes a piece of text is added to the railway that looks like a location but is not specified as a named location. All named locations are listed in the dropdown box in the timetable editor. Check that the location needed is in this list and is spelled correctly.

Failed to open timetable file, make sure it's not open in another application

The required timetable file failed to open for some reason. A common reason is that it's already open in another application, such as an editor, but it can also be because it's corrupted or isn't in the folder expected. Check that the file exists, that it isn't in use elsewhere, and that it is spelled correctly in the program timetables folder. Note that there can be two or more railways open at the same time with the same timetable loaded, but these timetable files aren't open, they are opened, loaded into the program, then closed again, so being open in another application does not include being in use in another railway application.

Front element: *'Front Track Element ID'* not linked to rear element: *'Rear Track Element ID'*

When a train is created or enters the railway it must specify first the ID of the rear track element on which it is to start followed by the front track element ID, which must be directly linked to each other. However it seems that the two specified elements are not directly linked.

Front of train attempting to start on a continuation at: *'Front Track Element ID'*

A continuation can only be used as a start position for trains entering the railway at that position, in which case the rear track element is the continuation. It seems that a continuation has been selected as a start position for the front of a train, which isn't permitted.

Front of train attempting to start on element connected to diverging points at: *'Rear Track Element ID'*

Trains can start on points, but only on the straight leg (or left hand leg if 'y' shaped). If a train attempts to start on a diverging leg - in this case the rear of the train - then this error is given.

Location name *'location'* appears in the timetable but is not a valid name. To be valid there must be track (but not a continuation) at a correspondingly named location.

Location names must have corresponding track elements (i.e. elements adjacent to platforms or at non-station named locations) to be valid. In this case it appears that the timetable specifies an invalid name. Valid names all appear in the dropdown box in the timetable editor so check that the names in the timetable are in the list. This error is usually caused by a spelling mistake.

Must have at least one exit element ID following 'Fer'

One or more continuation track element IDs are required to follow an 'Fer' event, indicating the exit location(s) that is or are valid. In this case there don't appear to be any.

No track element corresponding to track element identifier: *'Track Element ID'*

A track element ID has been listed in the timetable but there is no corresponding track at that location. Hide the timetable editor, select 'Show' for track information, and check the ID of the required element. It has probably been mistyped in the timetable.

Rear of train attempting to start on element connected to diverging points at: *'Track Element ID'*

Trains can start on points, but only on the straight leg (or left hand leg if 'y' shaped). If a train attempts to start on a diverging leg - in this case the front of the train - then this error is given.

Service xxxx: Error in timetable - Event: 'zzz'

There is something wrong with the event in question, probably a syntax error such as a colon instead of a semicolon, a mis-spelt command, or an event expected to be the last (i.e. a finish with no repeats or a repeat), but isn't the last. Check the syntax carefully and check that an entry that should be the last really is.

The element ID *'Track Element ID'* following 'Fer' duplicates an earlier element

A continuation track element ID appears to have been listed twice in the list following this 'Fer' event. One should be removed.

The element ID *'Track Element ID'* following 'Fer' is not an exit

The list of valid track element IDs following an 'Fer' event must all be continuations. In this case the listed element appears not to be. It is probably due to mistyping the ID so check and correct it.

Timetable invalid - unable to find a valid start time on its own line

There must be a start time on its own line, e.g. 07:00 with no text preceding the time. If there isn't then subsequent entries intended as services will be treated by the validator as comments.

Errors involving linked services (two headcodes given)

Linked services are those that have links across two services, for example the first service might have an 'Fns' entry (Finish and start a new service), where the second service is the corresponding 'Sns' (Start new service) entry, or the first might have an 'fsp' entry (split train from front) where the second is the 'Sfs' (Start from split) entry. The following errors are similar in that they occur when there is a discrepancy in the linked services. Examine each of the two indicated services in detail as the error may be in either one. In particular ensure that all linked services have identical times where they reference the other service and that the referenced service is correctly typed. For example service 2E26 might have a finishing entry 17:46;Fns;2E27. In this case the corresponding service 2E27 must have the same time in the corresponding 'Sns' service and refer back to the earlier service - 17:46;Sns;2E26.

Error in timetable - a zzz event (xxxx) appears in the same sequence as the corresponding linked event yyyy.

Here zzz is a linking event (Sns, Sfs, Fns, Fjo etc) that requires another train's headcode to be specified as the relevant link. This error occurs when both linked and linking

events occur in the same sequence, such that xxxx and yyyy are the same.

Error in timetable - location error in cross referenced trains xxxx and yyyy. One or other service does not have a location set.

There is a location missing in one or other of the linked services.

Error in timetable - cross referenced train yyyy is at a different location to the referencing train xxxx.

Both linked services must be at the same location when the first finishes and the second starts.

Error in timetable - cross referenced train yyyy has a different event time to the referencing train xxxx.

Both linked services must have the same event time when the first finishes and the second starts.

Error in timetable - cross reference missing in either xxxx or yyyy.

Here the reference to the other service appears to be missing.

Error in timetable - found more than one reference to xxxx from a train whose headcode is yyyy.

Two references to the same service are given from other services, one of which is that with headcode or service reference yyyy, or both references to xxxx occur in yyyy.

Error in timetable - incorrect shuttle link to train whose headcode is xxxx from train whose headcode is yyyy, has to be Fns-sh, Frh-sh.

The wrong finishing command appears to have been given.

Error in timetable - only one repeat is provided for the train whose headcode is xxxx and the associated train with headcode yyyy.

These are linked trains so if there are repeats both services must have identical repeat commands, but it seems that only one has been provided.

Error in timetable - repeat items don't correspond for the train whose headcode is xxxx and the associated train with headcode yyyy.

Linked services that repeat must have identical repeat information.

Error in timetable - service yyyy , which links out from shuttle service xxxx, has the wrong start time. It should correspond to the finish time of the last shuttle.

This relates to a shuttle finishing service denoted by code 'Sns-fsh'. When setting the start time it must correspond to the time for the corresponding 'Fns-sh' event + 'n' times the repeat time, where 'n' is the number of repeats. For example, if the shuttle repeats at 30 minute intervals and there are 20 repeats, then if the 'Fns-sh' time is 07:45, the corresponding 'Sns-fsh' time should be 07:45 + (30 x 20) minutes, i.e. 17:45.

Error in timetable - shuttle in-link service xxxx finish time not consistent with start time of shuttle service yyyy.

Here there appears to be a discrepancy between the finish time of a shuttle feeder service and the first shuttle start time.

Error in timetable - shuttle service xxxx first repeat restart time not consistent with finish service yyyy.

Shuttles in their simplest form consist of an outbound service A to B, which finishes at B and forms a new inbound service from B back to A. Here there appears to be a discrepancy between the finish time of the inbound service and the start time of the first repeat outbound service. The start time of the first repeat outbound service is the start time of the original outbound service plus the 'minutes' value in the repeat command 'R;m;d;n", where 'm' is the minutes value, 'd' the digit increment value for each repeat, and 'n' the number of repeats. This time has to correspond to the finish time of the original inbound service or this error will be given.

Error in timetable - the non repeating link service yyyy appears in the same sequence as the corresponding shuttle service xxxx.

This error means that the non-repeating link (feeder or finishing) service reference appears in the place where the linked shuttle service should be. It is most likely caused by the two referenced services (non-repeating link and continuing shuttle link) being transposed.

Error in timetable - unable to find a corresponding 'Fjo' event for the train whose headcode is xxxx and is joined by a train with headcode yyyy.

A joining service (headcode or service reference yyyy) must end with e.g. 12:30;Fjo;xxxx, but the 'Fjo' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - unable to find a corresponding 'Fns' event for the 'Sns' train whose headcode is xxxx and is formed from a service with headcode yyyy.

A service that finishes to form a new service (here with headcode or service reference yyyy) must end with e.g. 12:30;Fns;xxxx, but the 'Fns' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - unable to find a corresponding 'F-nshs' event for the 'Sns-sh' train whose headcode is xxxx and is a new shuttle service formed from the service with headcode yyyy.

A shuttle feeder service that finishes to form a new shuttle service (here with headcode or service reference yyyy) must end with e.g. 12:30;F-nshs;xxxx, but the 'F-nshs' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - unable to find a corresponding 'Fns-sh' event for the 'Sns-fsh' non-shuttle service whose headcode is xxxx formed from a shuttle service with headcode yyyy.

A shuttle service that finishes to form a shuttle finishing service (here with headcode or service reference yyyy) must end with e.g. 12:30;Fns-sh;aaaa;xxxx (where 'aaaa' is the shuttle service and 'xxxx' the finishing service), but the 'Fns-sh' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - unable to find a corresponding 'Sns-fsh' event for the 'Fns-sh' shuttle service whose headcode is xxxx and forms a new non-shuttle service with headcode yyyy.

A shuttle finishing service that represents the last movement of a shuttle service (here with headcode or service reference yyyy)

must begin with e.g. 12:30;Sns-fsh;xxxx, but the 'Sns-fsh' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - unable to find a corresponding 'Sns-sh' event for the 'F-nshs' train whose headcode is xxxx and forms a new shuttle service with headcode yyyy.

A shuttle service that starts from a feeder service (here with headcode or service reference yyyy) must begin with e.g. 12:30;Sns-sh;xxxx, but the 'Sns-sh' code seems to be missing. Ensure it is typed correctly and that the service references are correctly specified.

Error in timetable - xxxx has a different number of references to yyyy than the other way round.

This is the result of a simple count of linked references 'xxxx' and 'yyyy' being different. The difference will generally be one, with for example two of 'xxxx' and one of 'yyyy' or vice versa. Check where each reference in used in the timetable to find the discrepancy.

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