

## Scripts and icons for the French (SNCF) signals – version 1.0 - 01/05/2015

This zipped archive contains all the icons and the scripts needed to simulate in Traindir 3<sup>1</sup> the French signals used in the SNCF network (they work only with version 3.8s or later). A big thanks goes to Denis Auger and Freddy Dulepa: Denis designed the first French package and Freddy expanded it. He involved me in this work and explained me how French signals work, so I was able to fix, combine and expand Freddy's scripts to obtain this package.

Only the signals for the normal lines are simulated (carré, block and distant signals), as high speed lines – TGV lines – have no signals: a panel on the loco gives the driver a continuous indication of the speed to keep or to reach, and the system checks and brakes automatically if he doesn't obey the indication.

Compared to the Italian system, there are 3 main differences:

- 1) Speed limits for diverging switches (just 30 or 60 km/h) are enforced from the first to the last switch that the train encounters, not from the signal, even if the program will enforce them from the signal on.
- 2) Signals cannot show both "Slow" and "Expect slow" at the same time, so if a second "Slow" follows, the first signal will show "Slow" plus "Expect Stop"; the driver will obey the second "Slow" as soon as he sees it.
- 3) There are 3 "red" aspects: the double red (carré) is the absolute stop, never passable unless told so by someone else; the single red (semaphore) is permissive and can be passed by sight after a full stop; it's used by block signals (in Traindir this is an absolute stop) and towards depot and yards (Traindir doesn't enforce the full stop). The third is the flashing red, which doesn't require a full stop and is passable by sight at max. 15 km/h; it's used towards busy tracks, so in Traindir it's used for joining trains (signal cleared with ctrl+click).

### Installation

Open the .zip file, select all files and copy/extract them in their specific folder, considering the following.

At the moment Traindir permits only one folder to keep all the signals and icons in, the one specified in the "Environment" tab of the Edit | Preferences command. I made the French package compatible with the other packages of mine, so the same folder can be used (typically C:\Program Files\Traindir3\Signals) and mixed scenarios can be designed.

However, more and more packages will hopefully be available in the future (Japan, USA, etc.), so it could be a good option to use a separate folder for each package (for example C:\Program Files\Traindir3\Signals\_SNCF) and modify the folder the program points to whenever the signal system changes.

### Summary of the available signals

- Manual block signals with 2 lights, now only present in simple crossing stations on single track lines.
- Deferred stop signals with 4 lights (disque), now only present in simple crossing stations on single track lines.
- Pure distant signals with 4 lights (avertissement), for lines where block signals are not concatenated.
- Automatic block signals with 3 lights or 3 +2 lights (capable to show the "Expect Slow").
- Main entry/exit signals with 4 lights (carré), eventually featuring also 2 or 4 auxiliary light to show the "Expect Slow" and/or "Slow" aspects.
- Shunting signals (dwarfs), in two forms: the commanding and the influential one, to be used alone or coupled with a main signal respectively.
- Fake signal representing a bumper (heurtoir); it prevents trains from exiting the scenario and forces the previous signals to show the "Expect Stop" aspect.

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<sup>1</sup> A software by Giampiero Caprino, who designed an excellent and very versatile simulator. I must thank him for all the adjustments he did to allow the implementation of this package.

All the signals feature the flashing red aspect for joining trains (signal opened with ctrl+click) and the single red aspect for shunting paths. The latter are determined by a speed limit less than 25 km/h or by the presence of a commanding dwarf.

### Script description

The naming scheme is very simple: "snCF" (the network manager company), underscore, name of the signal, .tds. extension. Except when indicated (automatic block signals) all the signals are to be placed in the scenario using the single head tool of the editor. For further details see each signal description.

snCF_bloc_man.tds snCF_disque.tds	Exit and entry signals (respectively) for the manual block, now only present on single track lines in simple crossing stations, usually featuring just two elastic switches where only the straight position allows facing point movements. The entry signal never has a distant, so the Yellow-Red aspect means "Deferred Stop", i.e. stop before the first switch beyond the signal. Someone will then tell the driver when he can enter the station.
snCF_bloc.tds snCF_bloc_R.tds	Automatic block signals with 3 lights to be placed in the plain line using the <u>two head</u> tool of the editor. The second script is for the last block before an entry signal, as it features also the two horizontal yellow lights needed to show the "Expect Slow" (R) aspects. Those lights are fixed for 30 km/h and flashing for 60 km/h. These automatic signals must be "activated" at the beginning of the simulation with the "Set sig. to green" menu command.
snCF_carre.tds snCF_carre_R.tds snCF_carre_RR.tds snCF_carre_R_RR.tds	Entry/exit signals with 4 lights (red is double), eventually featuring the two horizontal yellow lights needed to show the "Expect Slow" (R) aspects and/or the two vertical yellow lights needed to show the "Slow" (RR) aspects. Those lights are fixed for 30 km/h and flashing for 60 km/h.
snCF_avert.tds	Pure distant signal with 4 lights, to be used as distant of block or entry signals when the block is not concatenated. It must also be used hidden at least 1200 m before the manual block entry signal (snCF_disque.tds), to prevent previous signals different from snCF_bloc_man.tds from showing distant aspects.
snCF_dep.tds	Commanding shunting signal, capable to stop trains, to be used in yards; its presence activates the single red aspect in block and entry signals.
snCF_man.tds	Ininfluant shunting signal, ignored by trains, to be used combined with an entry signal when some paths go to a yard; it must be placed after the entry signal but it has to be linked before it. This signal clears whenever the entry signal is passable.
snCF_heurtoir.tds	This always red signal (mark the specific option in the properties) looks like a bumper. It must be linked to the last track element of an exit point to prevent trains from exiting a scenario through it. Previous signals will show "Expect Stop".

Aspect	Meaning
R	"Carré" or absolute stop. The signal cannot be passed unless it changes aspect or someone tells the driver to do so.
P	"Carré violet" (purple) or absolute stop when shown by a shunting dwarf. The signal cannot be passed unless it changes aspect or someone tells the driver to do so.
R	"Semaphore" or permissive stop. After a full stop <sup>2</sup> the signal can be passed by sight at max 15 km/h, expecting an obstacle or along a shunting path.
R <sub>x</sub>	"Marche à vue" or drive by sight at max 15 km/h expecting an obstacle (the train to join with); the driver is not required to stop the train.
Y R	"Disque" or deferred stop: the driver must stop the train before the first switch (the distance will be enough to safely do so, as this signal never has a distant), and wait there for someone to tell him to enter the station.
Y	"Avertissement" or expect stop: the next signal is red.
Y <sub>x</sub>	"Pre-avertissement" or distant warning: the next signal shows "Expect Stop" and it's at less than 1200 m from the following signal, which is unclear.

<sup>2</sup> Not enforcible in Traindir.

Aspetto	Significato
Y Y	“Ralentissement” or expect to slow: the next signal requires a maximum speed of 30 km/h over the switches that follow it.
Y <sub>x</sub> Y <sub>x</sub>	“Ralentissement” or expect to slow: the next signal requires a maximum speed of 60 km/h over the switches that follow it.
Y Y Y <sub>x</sub>	Like Y-Y, but the next signal shows “Expect Stop” and it’s at less than 1200 m from the following signal, which is unclear.
Y <sub>x</sub> Y <sub>x</sub> Y <sub>x</sub>	Like Y <sub>x</sub> -Y <sub>x</sub> , but the next signal shows “Expect Stop” and it’s at less than 1200 m from the following signal, which is unclear.
Y Y	“Rappel ralentissement” or slow: speed limit 30 km/h from the first encountered switch on.
Y <sub>x</sub> Y <sub>x</sub>	“Rappel ralentissement” or slow: speed limit 60 km/h from the first encountered switch on.
Y Y Y <sub>x</sub>	Like Y/Y, but the next signal shows “Expect Stop” and it’s at less than 1200 m from the following signal, which is unclear.
Y <sub>x</sub> Y <sub>x</sub> Y <sub>x</sub>	Like Y <sub>x</sub> /Y <sub>x</sub> , but the next signal shows “Expect Stop” and it’s at less than 1200 m from the following signal, which is unclear.
Y Y Y	Like Y/Y, but the next signal is red, o shows “Slow” too.
Y <sub>x</sub> Y <sub>x</sub> Y	Like Y <sub>x</sub> /Y <sub>x</sub> , but the next signal is red, o shows “Slow” too.
G	“Voie libre” or clear: drive at full speed at least until the next signal is seen.
G <sub>x</sub>	Clear like G, but slow down to 160 km/h before the next signal, which is not G.  This aspect is used only for lines where full speed is higher than 160 km/h. It must be activated by repeating the line speed limit after the signal, or inserting a fake ‘X’ station.
W	“Manouvre” or shunt, shown by a dwarf: proceed at shunting speed (max 30 km/h).
W <sub>x</sub>	Like W, but the next unclear signal is at less than 400 m.

R, Y, G, P, W = Red, Yellow, Green, Purple, White; the subscript <sub>x</sub> means flashing.

Some of the aspect names derive from the old mechanical signals:

*Carré* (square): it was a square sign divided into 4 squares (two white and two red) that by night showed two red lights, like today’s signals; when clear it turned face up, so the driver would see just its edge. For shunting the sign was all purple (*carré violet*), like the light used today.

*Semaphore* (semaphore): it was a rectangular red sign, similar to a semaphore signal. The sign rotated in the center to appear oblique when clear and by night it showed a red or a green light, like today’s signals.

*Avertissement* (advise): it was a yellow diamond sign (by night it showed a yellow light, like today’s signals) that turned face up when clear, so the driver would see just its edge.

*Disque* (disco): it was a round red sign (by night it showed a red light, like today’s signals), mounted together with the previous one. Both turned face up when clear, so the driver would see both signs for the deferred stop (that’s the reason of the Y-R lights in today’s signal), only the yellow diamond when he should stop at the station (exit signal still unclear), o just the two edges for free transit without stopping (exit signal already clear).

*Ralentissement*: it was a yellow triangular sign pointing up, mounted beside the yellow diamond sign; it would likewise turn face up when not relevant, so the driver would see just its edge.

*Rappel ralentissement*: it was a yellow triangular sign pointing down, mounted beside the yellow diamond sign on top of the square red-and-white sign; it would likewise turn face up when not relevant, so the driver would see just its edge.

## Icon naming

Icon names follow this scheme: some lowercase letters tell the type, a sequence of lowercase letters separated by underscores indicates the colours, .xpm extension.

sav:	Pure distant signal (avertissement).
sbloc:	Automatic block signal (3 lights) or manual block signal (2 lights).
scar:	Simple entry/exit signal with double red (carré).
sw:	Entry/exit signal with double red (carré) and the two vertical yellow lights needed to show "Slow" (fixed: 30 km/h, lampeggianti: 60 km/h).
sww:	Automatic block signal (3 lights) with the two horizontal yellow lights needed to show "Expect Slow" (fixed: 30 km/h, lampeggianti: 60 km/h).
sww....car:	Entry/exit signal with double red (carré) and the two horizontal yellow lights needed to show "Expect Slow" (fixed: 30 km/h, lampeggianti: 60 km/h).
swww:	Complete entry/exit signal with double red (carré) and the 4 auxiliary yellow lights needed to show "Slow" or "Expect Slow" (fixed: 30 km/h, lampeggianti: 60 km/h).
sdepot:	Shunting signal (dwarf) with 2 lights (purple and white).
sipcs:	Entry signal for the manual block (disque).
sheur:	Bumper, to block exit points.

## Colours and orientation

b,r,y,g,p,w:	Colours used in the light sequence: black (off), red, yellow, green, purple, white.
N,S,W,E:	For trains going up, down, to the left, to the right, in any direction