

Runway Status Lights (RWSL) - Training Scenario 3

Landing-Crossing-Take-Off Scenario (Under Nominal Conditions)



The Scenario 3 show the behaviour of the **RWSL** system on the **RWY 27L** and its vicinity. This scenario illustrates how the **THL** and the **REL** systems work in an approach case, runway crossing and take-off line-up case. It illustrates the use of the inner **RWY** in mixed mode (departures and arrivals on the inner **RWY**), and with a vehicle. The scenario has been planned with one landing case (demonstrating the **REL** system), one **RWY** crossing case, once one airplane has been already lined up on the **RWY** (demonstrating the **THL** system) and then, with one take-off case (demonstrating the **REL** system).

Two airplanes and one vehicle are involved in the sequence of events (one airplane landing, one airplane taking-off and one vehicle crossing the **RWY 27L**).

The cases illustrated are as follows:

- Landing under normal conditions
- **RWY 27L** crossing with lined up aircraft
- Take-off under normal conditions

Note: Although the preferential use of the inner and outer runways at **CDG** airport are for departures (inner runways **09R/27L** and **08L/26R**) and for arrivals (outer runways **09L/27R** and **08R/26L**) respectively, for this specific scenario the **RWY 27L** has been used for arrivals in order to illustrate the **REL** system under a normal approach procedure.

The inner **RWY** of a pair is used in mixed-mode when the outer **RWY** is not available.

In this video you should pay attention to these elements:

- At the beginning of the video, you can see that at all visible intersections, **RELs** are **ON**. This is because an airplane is on short final.
- You can then notice that, as the landing airplane approaches each intersection, the **RELs** are turned **OFF** accordingly, following the same logic as for a departing traffic.
- Then, after the departing aircraft is lined-up, a vehicle is cleared to cross the **RWY** and as soon as it moves from its holding point the **THL** in front of the lined-up airplane turns **ON**.

In this scenario, while **Airplane 1** is approaching the **RWY 27L**, **Airplane 2** taxis to the **Q4** holding point. During **Airplane 1**'s landing procedure, all the **RELs** are turned **ON** and they are turned **OFF** anticipating the pass of **Airplane 1** for each intersection. Once **Airplane 1** has landed, **Airplane 2** is cleared to line-up on the **RWY 27L**.

When **Airplane 2** starts with the line-up procedure, one Vehicle drives heading to the **K7** holding point. Once **Airplane 2** has lined up on the **RWY 27L**, the Vehicle is cleared to cross the **RWY**. When the Vehicle starts with the **RWY** crossing procedure, the **THLs** in front of **Airplane 2** turns **ON** (within 450m in front of it).

Once the Vehicle has vacated the **RWY 27L**, the **THL** turns **OFF**. **Airplane 2** is cleared for take-off. When **Airplane 2** starts its take-off roll, the **RELs** in front of **Airplane 2** turn **ON**. The **RELs** turn **OFF** anticipating the pass of **Airplane 2** for each intersection.

While **Airplane 3** is crossing the **RWY 27L**, **Airplane 5** lands and taxis to hold short of **RWY 27L** at **K3** holding point.

Once the **Airplane 3** has vacated the **RWY 27L**, the **THL** turns **OFF**. **Airplane 4** is cleared for take-off and it begins the take-off roll. Once **Airplane 4** is above a certain speed the **RELs** in front of **Airplane 4** turn **ON**. The **RELs** turn **OFF** anticipating the pass of **Airplane 4** for each intersection. After **Airplane 4** pass abeam **K6/Q2** intersection, Vehicle is cleared to cross the **RWY 27L**. Once **Airplane 4** is airborne the rest of the **RELs** turn **OFF**. **Airplane 5** is cleared to cross the **RWY 27L**.



RELs that are **ON** (illuminated red) indicate that the runway ahead is not safe to enter or cross. **THLs** that are **ON** (illuminated red) indicate that the runway is not safe for takeoff. **RED MEANS STOP!** Pilots should remain clear of a runway when an **REL** along their taxi route is illuminated. Pilots should not takeoff when a **THL** on the runway ahead is illuminated.