

Connect Registration and Pairing PDI Tips – Resolve Blinking Red SOS Light

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Taycan	As of 2020	Y1A, Y1B, Y1C	N/A	N/A
911	As of 2022	992	N/A	N/A
Cayenne	As of 2022	9YA, 9YB	N/A	N/A
Panamera	As of 2022	971, YAA, YAB	N/A	N/A
Macan Electric	As of 2024	XAB	N/A	N/A

Revision History

Revision	Release Date	Changes
0	July 16, 2021	Original document
1	August 21, 2023	Update of Technical Background & Service Information
2	August 7, 2024	Information for measuring GPS and mobile network signal strength along with recommendations to improve signal strength in the workshop

Condition

One or more of the following conditions exist:

- Porsche Connect services do not function.
- The SOS LED in the overhead console is off or flashes red.
- The Breakdown Call button does not function.
- The News and Weather tiles are missing in the PCM Central Display.
- The navigation satellite map view cannot be activated.
- The “log in” button is not selectable (greyed out) on the Taycan when attempting to log in with Porsche ID and Password with red SOS.
- The “add account” button is not selectable (greyed out) with red SOS.



Figure 1

Technical Background

The MIB3 infotainment system with Porsche Connect services was first introduced in Model Year 2020 Taycan, and expanded to 2022 911 (992), Cayenne (E3), and Panamera (G2-II) models. The Connect control unit in this system (Part ID 9196) utilizes an embedded SIM (eSIM) that is not preregistered to a specific US mobile network in production. Therefore, the network must be registered and paired during the Vehicle Handover/PDI process. For comparison, Connect services in 2021 and older 992, E3, and G2-II utilize an eSIM that is preregistered to a US mobile network in production.

Since the MIB3 system utilizes an eSIM that is not preregistered at the factory, the eSIM must go through a "Registration and Pairing" (R&P) process once Flight Mode is deactivated in the Connect Control Unit (Part ID 9196, also known the ConBox High or Emergency Call Control Unit). The R&P process typically takes 5 to 20 minutes under ideal conditions, but often requires a subsequent sleep cycle. In some cases, this process can take a few hours depending upon signal strength and backend system availability. Once the eSIM completes the R&P process, the SOS light in the overhead console will turn green. (As in Figure 1.)

With the prior system (MIB2+ in 2021 and older 992/E3/G2-II, for example), the SOS light turns green almost immediately after flight mode is deactivated because the R&P process had already occurred when the vehicle exited production. With the new MIB3 system, the R&P process will always take longer compared to prior systems.

In most cases, the SOS indicator will turn green after the initial test drive following the PDI, or after the vehicle has had time to go through a sleep cycle of at least 30 minutes.

Registration and Pairing Process Summary

The following steps explain at a very high level how the R&P process works for MIB3 vehicles. This complex process is why the R&P can take longer than in previous vehicles with the MIB2+ system.

- Step 1. Flight Mode is deactivated during the Vehicle Handover process at PDI, and the Connect control unit with eSIM wakes up.
- Step 2. The eSIM attempts to connect to a 3rd Party service provider called Cubic using an AT&T or T-Mobile roaming data connection. If there is poor AT&T or T-Mobile service in the immediate area (inside the service bay, for example), then this step could fail until the car is moved to an area with a stronger AT&T or T-Mobile signal.
- Step 3. The vehicle uses GPS to recognize its location in the United States and begins to localize itself. If there is poor GPS service in the immediate area, then this step could fail until the vehicle is moved to an area with better GPS.
- Step 4. After the vehicle registers with Cubic, because of the US localization, the device receives an eSIM profile for the local Verizon network, disconnects from AT&T and T-Mobile, and attempts registration on Verizon's LTE network. If there is poor Verizon service in the immediate area (inside the service bay, for example), this step could fail until the car is moved to an area with a stronger Verizon signal. A long sleep cycle of 30 minutes or more may be needed at this point.

- Step 5. Once successfully registered with Verizon, the device will inform Cubic. Cubic will then activate the Wi-Fi profile for the device along with a Porsche Center demo mode in the Porsche Connect backend. This provides Real-Time Traffic Information and the media source Online Radio, for example.
- Step 6. Lastly, the MIB3 system should download the relevant Porsche Connect licenses. At this point, barring any issues in the backend systems, the SOS light should turn green.

Service Information

Note the following table. The key criteria for successful R&P are:

<p>1. Sufficient GPS service</p>	<p>Standard: The vehicle must have 5 satellites tracking.</p> <p>Ideal: The vehicle should have at least 6 satellites tracking.</p> <p>This value is available in the PIWIS tester.</p> <p>Commercial meters and apps are also available to measure GPS signal strength.</p>
<p>2. Sufficient mobile network service</p>	<p>Standard: For Macan H2, the value must be 20% or higher as measured by the PIWIS tester. For Y1A, 9YA, 992, 971 the value must be 48% or higher as measured by the PIWIS tester.</p> <p>This corresponds to a mobile network signal strength greater than -89 dBm.</p> <p>Ideal: Higher signal strength values are better. Mobile network signal strength should be greater than -85 dBm.</p> <p>Commercial meters and apps are also available to measure mobile network signal strength.</p>
<p>3. Sufficient awake time to complete localization</p>	<p>Standard: The vehicle needs at least 25 minutes with ready status (or T15 on).</p>
<p>4. Sufficient asleep time to reset the system</p>	<p>Standard: The vehicle needs uninterrupted sleep cycles as described in the summary above.</p>

Note: GPS signal strength and mobile network signal strength vary over time and many factors affect them. If your workshop signal strength issue is intermittent and rare, minor environmental changes can help you complete a PDI successfully. However, if all or part of your workshop has persistent signal strength issues, conditions within the workshop should be improved. This may include adding hardware or workshop infrastructure to boost the signal strength.

Recommended Signal Boosters

If your workshop needs improved signal strength, note the following PCNA recommended signal boosters:

<p>GPS</p>	<p>L1/L2GHNRRKIT</p> <p>Level 1/Level 2 Hangar Network Re-Radiating Kit</p> <p>https://www.navtechgps.com/gps_networking_l1l2ghnrrkit_l1l2_hangar_network_re_radiating_kit/</p>
<p>Mobile Network</p>	<p>CEL-FI GO G43</p> <p>Multi-Operator Cellular Coverage Solution</p> <p>https://nextivityinc.com/products/cel-fi-go-g43/</p>

R&P Process Tips

If you experience issues with the R&P process during PDI, note the following tips.

- A. If the SOS light does not turn green after a test drive or after the car has been through a long sleep cycle following the test drive, then allow the car to sit outside with the ignition on and the engine running – or with driving readiness established in Taycan – for 20 to 30 minutes. If this has already been done, then proceed to the next step.
- B. Perform a vehicle sleep cycle of 30 minutes or more. To do this, disconnect the PIWIS Tester VCI, roll up all windows, close all doors and lids, and lock the vehicle using the key remote. Doing this will allow the car to go to sleep faster. Store the key at least 10 meters (30 feet) away from the vehicle to ensure it does not prompt the vehicle to stay awake.
- C. After 30 minutes of sleep, unlock the car, turn on the ignition, and check the status of the SOS light.
- D. If the SOS light does not turn green, then perform the function “Deactivate Flight Mode” using the PIWIS Tester again and repeat steps A-C a second time.
- E. If the SOS does not go green after the second time through steps A-C, please perform a capacitive discharge by disconnecting the vehicle 12V battery from the vehicle electronics. It should not be required to remove the backup battery from the ConBox High as long as the capacitive discharge is performed for 60 seconds or more while there is no active emergency or roadside service call in the vehicle.
- F. After the car sits for 60 seconds with the 12V battery disconnected, reconnect the battery and turn on the ignition/re-establish driving readiness.
- G. Check the status of the SOS light. If the SOS light still does not turn green, contact Porsche Connect Support via the *Digital Services Support Request Form*.

Warranty

This document offers tips to help if the R&P process fails. The R&P process is a part of PDI. Steps taken to complete the process as detailed above are not to be claimed under warranty.

Search Items

Connect, satellite, reception, overhead console

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