BMW	SI B65 20 12 Audio, Navigation, Monitors, Alarms, SRS	January 2013 Technical Service

SUBJECT
RAD2plus: Radio Causes Battery Drain

MODEL
E82

E88

E89

E90

E91

E92

E93

Produced from September 2010 to March 2012 with option 663 (Radio BMW Professional, RAD2+)

SITUATION
The vehicle's battery state of charge is very low after the vehicle was parked for a longer period of time (e.g., overnight).

CAUSE
The RAD2+ radio doesn't allow the vehicle to enter full sleep mode, and causes a current draw from the battery with ignition off.

CORRECTION
Do not replace parts for this issue.

Step 1:

1. Perform a vehicle test using the latest ISTA diagnostic software.

   Note: When the ISTA system message displays: "Battery voltage only "XX.XX" V. Please connect charger." Please note the displayed battery voltage reading in the repair order comments section. This documentation is not necessary when part of an approved Technical Service repair procedure; the battery charger is required to be attached before performing the Vehicle Test.

2. When the diagnosis result shows that the battery state of charge is low, follow and complete the test plan for Energy Diagnosis. A DIAGCODE will be given at the end of the test plan.

   a. When the test plan result shows that the RAD2+ radio is the root cause (permanently waking up the vehicle), perform step 2.

   b. If the test plan result doesn't show the RAD2+ radio as the root cause, follow relevant test plans and

perform more diagnosis.

Step 2:

1. Program the vehicle using ISTA/P 2.48.1 or later.

   Note that ISTA/P will automatically reprogram and code all programmable control modules that do not have the latest software.

2. Complete all of the post-programming work as indicated in the ISTA/P Final Report. This includes performing diagnosis and clearing faults with ISTA, if necessary.

For information on programming and coding with ISTA/P, refer to CenterNet / Aftersales Portal / Service / Workshop Technology / Vehicle Programming.

WARRANTY INFORMATION
Covered under the terms of the BMW New Vehicle/SAV Limited Warranty.

Defect Code:	65 12 69 02 00	
Labor Operation:	**Labor Allowance:**	**Description:**
00 00 006	Refer to KSD2	Performing "vehicle test" (with vehicle diagnosis system – checking faults)
and if necessary, also		
61 21 528	Refer to KSD2	Charging battery
and		
61 20 502	Refer to KSD2	Performing battery energy diagnosis
and		
61 00 710	Refer to KSD2	Programming / encoding control unit (s) (not including CAS)
or		
61 00 720	Refer to KSD2	Programming / encoding control unit (s) (with CAS)

Labor operation code 00 00 006 is a Main labor operation. If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead.

Refer to KSD2 for the corresponding flat rate unit (FRU) allowance. Enter the Chassis Number, which consists of the last 7 digits of the Vehicle Identification Number (VIN). Click on the "Search" button, and then enter the applicable flat rate labor operation in the FR code field.

If a control module fails to program correctly or initializations are required, the additional work must be claimed with separate labor operations under the defect code listed above, refer to KSD2.

Other Repairs

If performing other ISTA diagnostics and the related test plans results with **eligible and covered work**, claim this work with the applicable defect code and labor operations listed in KSD2.

Note: Please follow any TeileClearing (TC) or Diagcode (DC) requirements that may apply to this additional work.