

# Installation Instructions & Use Recommendations

## FMS Accessories – USB Outlet & Voltmeter w/Switch

These instructions must be read carefully and thoroughly **before** beginning work. FMS Solutions, LLC accepts no liability for damage caused by failure to observe the installation instructions or use recommendations.

**Installation of this accessory does not change the factory specified load limits for the motorcycle.**

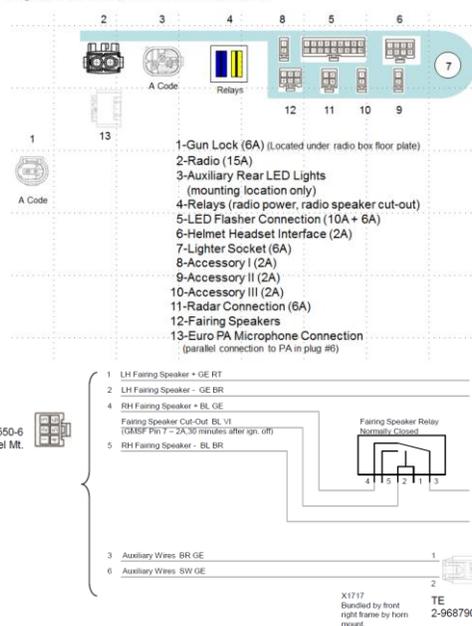


FMS Accessory USB / Voltmeter can be connected in three different methods.

1. Connect in parallel to the fairing power socket, which is connected to the main motorcycle battery. The ON/OFF switch is of particular value in this installation as you can turn the socket off so that battery maintenance charging through the power accessory sockets is not affected.
2. Connection to the auxiliary battery, which allows you to monitor the auxiliary battery charge rate as well as voltage during violators stops when the ignition switch is off. Connection is made normally through ACC II or ACC III, which provides the added benefit of allowing you to charge your phone or helmet for up to 30 minutes after ignition-OFF.
3. Same as #2, but using the auxiliary wires already in the harness at the speaker plug to reduce labor.

Note that these circuits are monitored so that if any short circuit were to occur, that particular node would shut-down until the problem is rectified. This is why no fuses are provided in the kit.

Plug connections inside radio box of the R 1200 RT-P:



Remove RH fairing side panel. Loosen RH front protection bar to enable safe removal of the side panel without causing damage. (panel removal instructions are below if needed)

Remove the large plastic nut from the back of the USB outlet and center it over the RH fairing panel above the power accessory socket. Using a pencil, draw a circle around the inside of the nut to indicate where to drill the 1 1/8" hole.

First drill a pilot hole to make sure your Unibit doesn't wander, then follow-up with a large Unibit to drill out to the necessary 1 1/8" diameter. You can also use a hole saw if that is more readily available.



Install USB through hole, install nut behind and tighten, correcting plug and weatherproof cover alignment as desired.



For connection to the accessory power socket, connect the supplied harness to the USB (red = + / brown = -). Remove the Hirschmann connector from the existing accessory power socket and connect that lead to the mating plug on the "Y" harness at right. Connect the other mating "Y" harness plug to the accessory power socket. With this connection, the socket should shut-off 50 seconds after ignition-OFF.

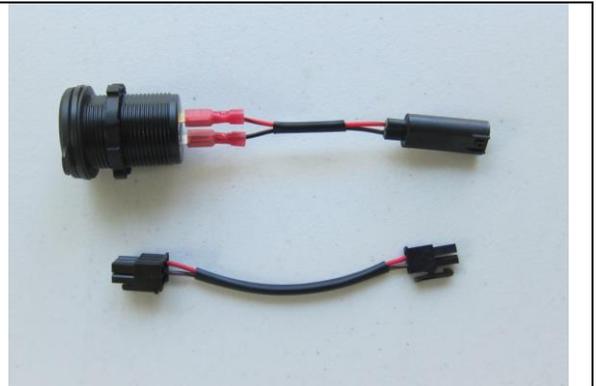
**Note:** When using the BMW battery charger, turn the USB socket ON/OFF switch to OFF to ensure that the socket does not affect the battery charger sleep mode.



### Installing using auxiliary cable to Aux. battery / radio box

This installation utilizes power from the auxiliary battery connections ACCII or ACCIII. These connections have a 25 – 30 minute live time after ignition-OFF, which is helpful in either monitoring the auxiliary battery voltage (ignition-OFF) as well as utilizing this time to charge a helmet headset battery or cell phone during a break.

This instruction uses the auxiliary wires in the RT-P wiring harness to transfer power from the radio box to the USB outlet.



Locate the auxiliary cable plug which is taped to the RH side harness at the steering head that runs up to the RH handlebar switch. The plug is held to the harness with a round of tape, so you must cut the tape to free the plug / cable. Don't confuse this with the civil horn plug ... note wire colors below.

Aux. Harness Wire Colors: Brown/Yellow and Black/Yellow.

Horn Wire Colors: Green/Grey and Brown



Route the cable past the air intake tube and plug into the pigtail harness from the USB outlet. Secure the harness by replacing the cable tie on the radiator with the one provided capturing all three cables at that point.



Insert the harness plug into the speaker outlet (6X) and then select ACC II or ACC III for the other end of the harness.

Whenever the ignition is ON or up to 30 minutes after ignition-OFF, the USB outlet will function, enabling you to see the voltage on the auxiliary battery, monitor the charging rate when the engine is running, as well as charge accessories such as phones or BT helmet batteries while parked.



### Installing power cable from auxiliary battery / radio box

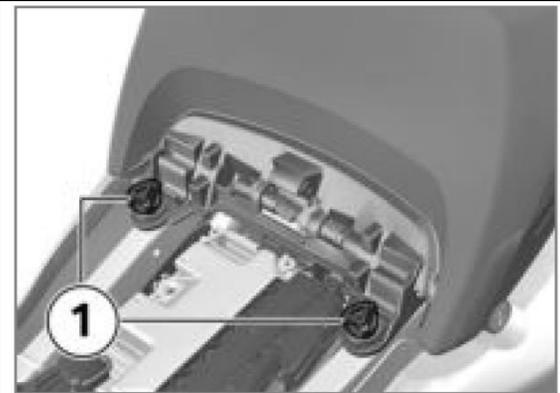
This installation utilizes power from the auxiliary battery connections ACCII or ACCIII. These connections have a 25 – 30 minute live time after ignition-OFF, which is helpful in either monitoring the auxiliary battery voltage (ignition-OFF) as well as utilizing this time to charge a helmet headset battery or cell phone.



Remove the T25 trim screw nearest the RH rubber grommet and pull the lower black plastic trim to the outside. Slide the cable port grommet out and insert the cable connector up through the grommet – reinstall grommet. Connect power cable for voltmeter to ACCII or ACCIII. Temporarily close the radio box lid, remove the seat and unscrew the seat bolster to enable routing the power cable along the frame under the seat bolster and seat. Use provided cable ties to secure cable to frame.



Remove seat bolster by loosening the two thumb nuts, then pulling the bolster forward. As the radio box unlock switch cable will still be connected, it is best to open the LH saddlebag and place the seat bolster in there so that the cable is not damaged.



Route the cable along the inside face of the RH square frame as shown at right, securing using cable ties provided.

Caution: do not open the radio box lid past the center line with the seat and seat bolster removed or damage to the hinge could result from binding.



Pull black trim panel away from fuel tank edge and run cable along frame support, through the plastic guide, behind the braided fuel line and behind the throttle body.



Route the cable up behind and intake tube and coolant expansion tank. Secure onto existing wiring harness.



Complete connections to the USB socket base:

Red = + (darker colored terminal)  
Black = - (lighter colored terminal)

Note that the polarity is molded into the base of the USB socket.

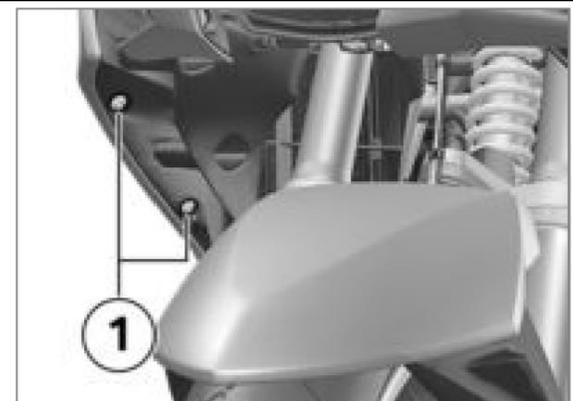


### Removal of body panels

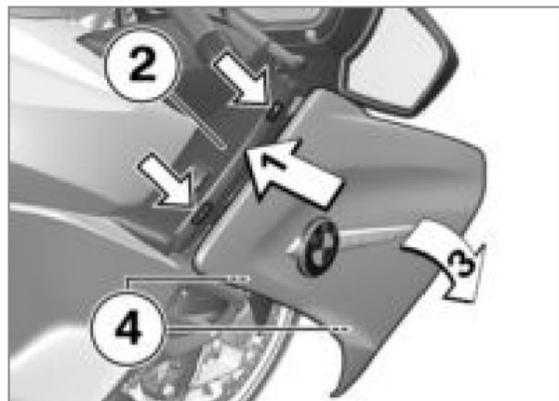
The steps below to best gain access for routing the wire cable is highly recommended. Consider if you have the requisite skills to do this work.

Remove the two screws inside the RH panel front radiator edge to remove the RH panel.

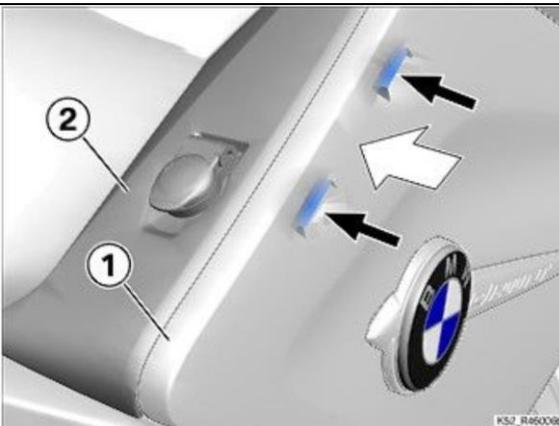
Note: Images from your BMW Rider's Handbook



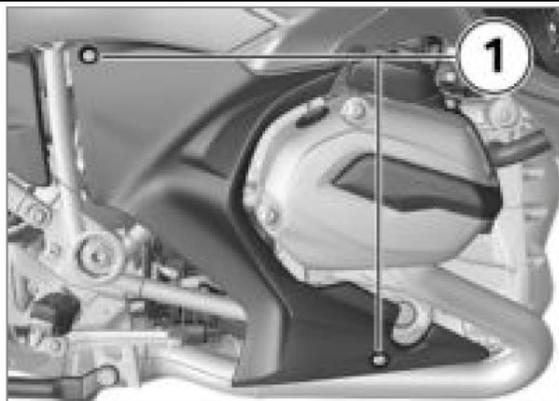
When removing and installing RH panel, note the tabs that are on the rear facing edge of the panel, which require the panel to be pulled-out at the front (rubber grommet prongs), then moved back to “unhook” the two tabs on the panel.



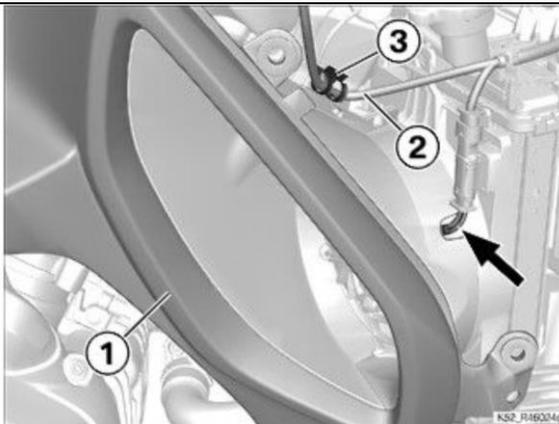
Be very careful not to damage the tabs when removing and installing RH panel.



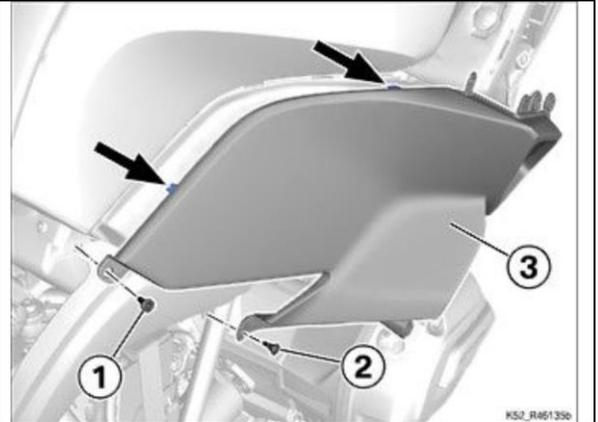
Remove and reinstall RH engine spoiler to gain access to fasteners to remove knee cover.



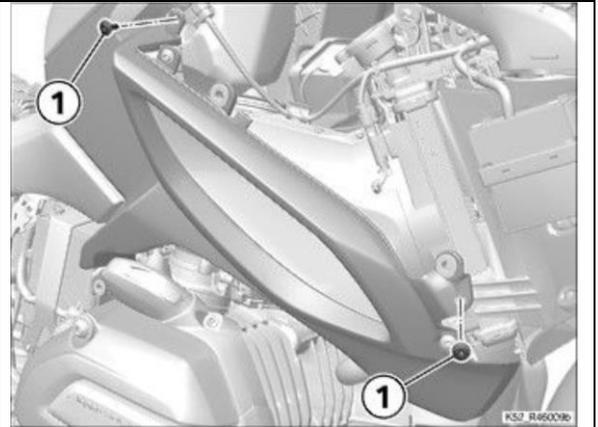
Remove and reinstall RH knee cover panel route wiring.



Note tabs on RH knee cover panel when removing and installing panel.



Note all screw locations when removing and installing panel.



**Feedback:** Thank you for your purchase and we welcome your feedback as we too want to make every accessory exceed your expectations. Report any comments, suggestions, problems or concerns to FMS Solutions, LLC at [info@fmsaccessories.com](mailto:info@fmsaccessories.com) .

**FMS Solutions, LLC Limited Warranty**

FMS Solutions, LLC warrants to the first retail purchaser of new FMS Accessory products, to be free from defects in materials or workmanship, for a period of three (3) years from the original date of purchase as noted on the FMS Solutions, LLC invoice or original dealer invoice, except for paint and powder-coated finishes, which are warranted for the first 12 months only. LED lights from Fenix, Inc., Code 3, Inc. and Littlite are covered for 5 years by their manufacturer's respective warranties – processed through FMS Solutions, LLC.

**This warranty extends only to the FMS accessory and does not include:** damage caused by accidents or abuse; incorrect installation; labor to diagnose, remove, repair or replace; any consequential damage or loss of use. Any FMS Accessory suspected of being defective should be returned to FMS Solutions, LLC along with a copy of proof of purchase and warranty request form available on the FMS website. FMS Solutions, LLC will determine if the FMS accessory has a warrantable defect, and if so, will repair or replace the item and return it to the sender without charge. The decision to repair or replace said item is solely the prerogative of FMS Solutions, LLC.

**Note:** Police motors can operate in a very rough environment since police motors are a "tool". They can be dropped, knocked-over, etc. without concern as the officer has a job to do and determines what is necessary at any given moment. Warranty is for defects in materials or workmanship. Therefore, the ability of an item to become broken or damaged does not mean it is warranty ... it just means it is broken or damaged and in need of repair or replacement. No manufacturer warrants their products to be indestructible. Any questions should be directed to [info@fmsaccessories.com](mailto:info@fmsaccessories.com) .