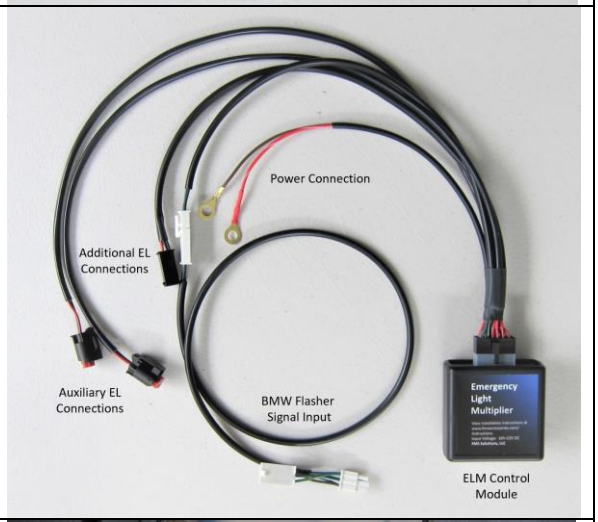
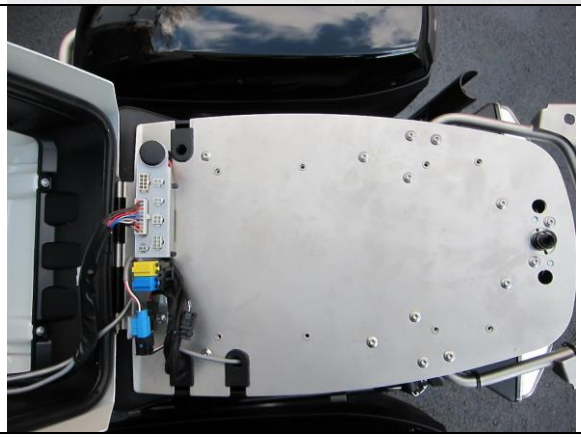
Installation Instructions & Use Recommendations

FMS Accessories – Emergency Light Multiplier Kit

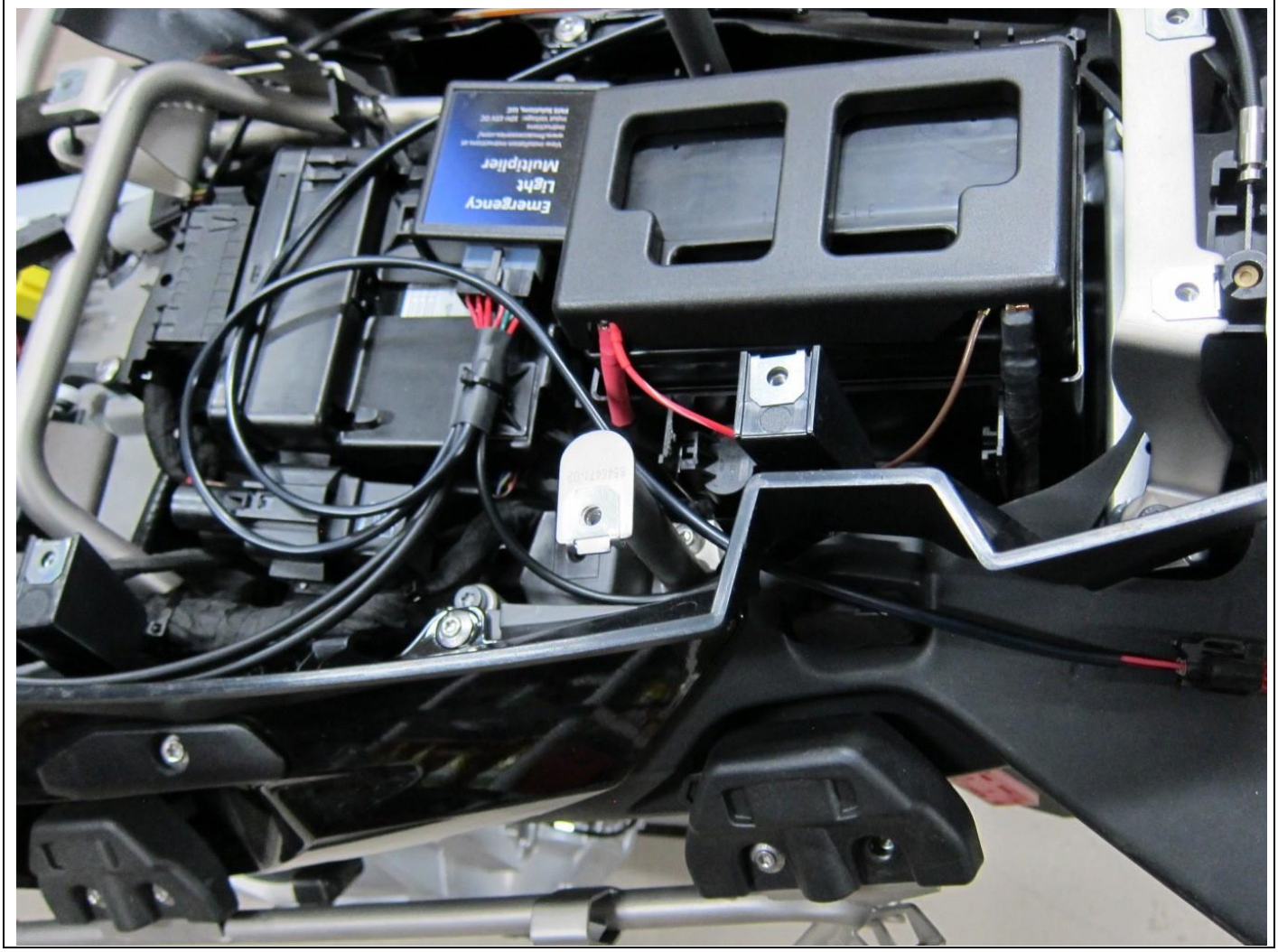
These instructions must be read carefully and thoroughly **before** beginning work. FMS Solutions, LLC accepts no liability for damage caused by failure to observe the installation instructions or use recommendations.
Installation of this accessory does not change the factory specified load limits for the motorcycle.

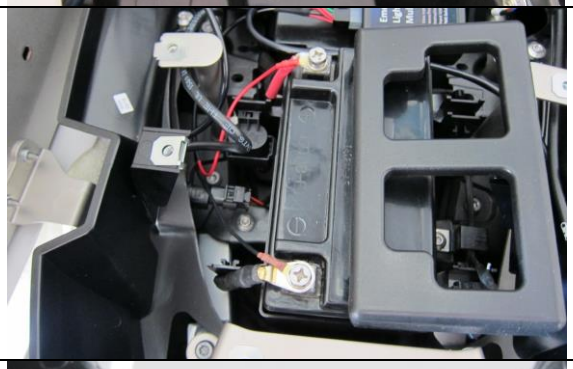
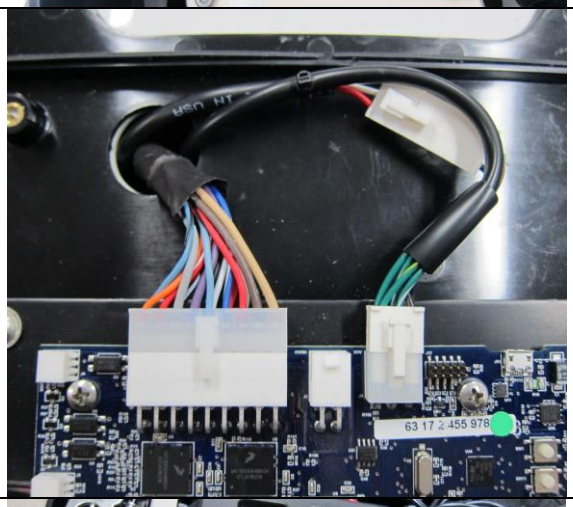
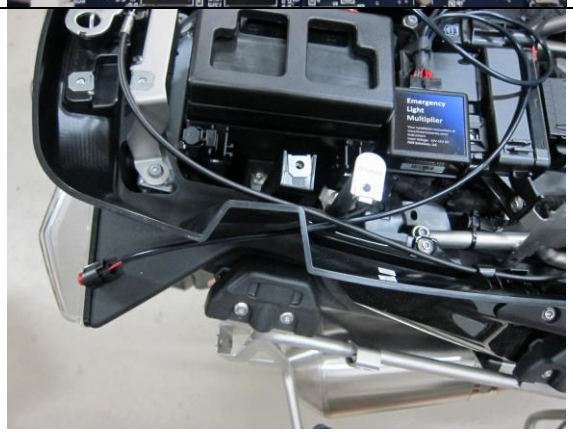
The FMS Accessories **Emergency Light Multiplier** kit is a special module that can power up to 12 additional emergency lights, flashing them in sync with the stock BMW emergency lighting system. The module is designed with an exceptionally low parasitic load, so unlike most all other accessories, this one can be connected directly to the auxiliary battery without fear of parasitic discharge. This enables users to utilize the other power outlets on the motorcycle for their other accessories. It is also internally protected, so no in-line fuses are needed. If the unit is overloaded or encounters a dead short in the output, it will simply shut-down.	
The ELM kit comes with a harness that is terminated to connect to a set of rear facing emergency lights (though you could use them in any direction if desired). Connections are: • Power Connection / Battery + and – • Male / Female plug to tap duplex rear light cable at rear emergency light pod / flasher board • Two outputs (24”) to rear facing lights (lights sold separately) • Connection to more emergency lights	
Concurrent with removing the T25 screws on the floor of the radio box to release it, you will need to disconnect the blue 3-conductor plug which is the disconnect for the rear duplex emergency light. Route the portion of that cable that came from the rear of the bike (smaller plug) back under the floor plate. You will connect it later to the ELM harness.	

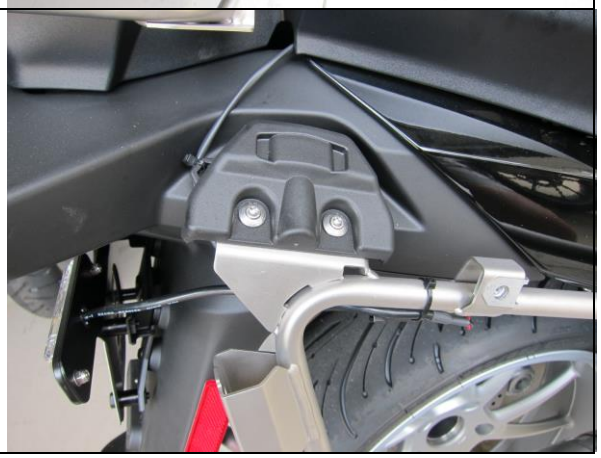
Open the LH saddlebag and place a soft large towel or blanket over the bag and surrounding surface to ensure that the radio box is not scratched. Remove the screws from the radio box floor plate (other than the four holding the antenna / duplex light bracket). Roll the assembly over to the left – just need to expose the area surrounding the auxiliary battery. Once you have done this before or if you are familiar with the process – you would just raise the rear floor plate with the trim attached to install the ELM.

Note: Pay attention to the radio box latch assembly as it is secured to the floor plate via the trim. The latch and trim should stay in place while the rest rolls left.

This is what the finished installation will look like. Follow the notes below for tips on the installation.
Note: The blue duplex light connection has been replaced with a cable running to the rear light pod to connect directly at the flasher board.



Secure the ELM module to the carrier of the GMSF with the Velcro provided. Note that there is a tab on the right side of the GMSF mount – make sure the ELM module sits flat on the carrier. Plug the harness into the ELM module. You will not route the rear light outputs yet as you will need to first determine which side you want them on based on how you want the lights to flash compared with the stock lights.	
Connect the Power and Ground terminals to the auxiliary battery. Red on Red / Black on Black. Ensure that the padded cover to the auxiliary battery is back in place as this keeps the battery secure and ensures that the battery cannot bounce up and hit the terminals on the underside of the radio box floor plate.	
The ELM module switches power to the auxiliary emergency warning lights based on trigger signals from the rear duplex light. That signal is received from the connection at the blue 3-conductor plug inside the radio box at the terminal strip. You unplugged the harness earlier, now bring the short black plug from the rear harness back underneath the floor plate and connect it to the mating blue plug on the harness near the ELM module. Route the mating 3-conductor plug through the grommet and connect to the blue plug on the radio box bracket.	
Route the two output leads to the emergency lights out the wire port on the trim skirt near either side of the battery. I always prefer to connect those lights prior to putting it back together only to ensure that the Left vs Right side is correct, based on how you want them to flash relative to the duplex light. The output leads are the same length, so swap them if needed to get the lights flashing the way you prefer. Route the output lead (black 4-conductor plug) up through the LH floor plate grommet – or keep underneath, depending on whether you are ready to add even more lights.	

Place a loose cable tie around the support to capture the cables – only to ensure that they can't drift up when securing the radio box floor plate – this keeps wires from being pinched between the floor plate and the mounts.	
Install the light mount frame that was purchased separately using the license plate bolts. If an assault rifle mount is present, use the spacers and longer bolts provided in the kit to move the plate rearward to provide clearance for the 30 round assault rifle magazine. The light mount frame should not obstruct the reflector or other lighting devices.	
Though it is possible to make this connection without removing the saddlebag, it is much easier if you do. It is only two screws and then everything is right in front of you. Route cable out the cable exit port and secure to the saddlebag mount using a provided cable tie. Plug in the cable to the LH rear auxiliary emergency light and secure the waterproof plug to the saddlebag mounting frame.	
Route cable out the cable exit port and secure to the saddlebag mount using a provided cable tie. Plug in the cable to the RH rear auxiliary emergency light and secure the waterproof plug to the saddlebag mounting frame.	

When mounting lights in the saddlebag, position the light vertically as shown at right. Using the foam gasket as a template, drill the M4 mounting bolt holes as well as a 9/16" center hole for the cable. A stepped Unibit generally provides the best results when drilling holes in the plastic saddlebag material. Utilize the gasket with the light to make a good seal once the light is mounted.

Calculate the cable exit point on the inside edge of the saddlebag and drill a 9/16" hole in the saddlebag. That is the correct hole size for the grommet supplied with the light and is large enough for the waterproof BMW connector to exit the bag. Be aware of cable abraision – position your exit hole so that a minimum of cable is exposed on the inside of the saddlebag to abrasion from the officer's equipment.

When reinstalling the radio box, ensure that no cables are caught between the mounting points and that the battery cover is in place.

Secure two screws in the middle first and then work your way around aligning the radio box base plate with the mounts and securing. Don't tighten the screws until all mounting screws are in place and the radio box feels "centered". Secure rear latch to trim, then tighten all T25 screws securely.

Note: ELM modules with a red or green dot on the bottom beside the SN label no longer require a diode kit. The circuits in these modules has been updated to a higher voltage threshold to resist any reverse current caused by sunlight on the stock red BMW LED emergency lights.

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 .

If you are stuck and need help, call our cell at 201-264-8365 (Florida – Eastern time zone).

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 Feniex, 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 .