R 1200 RT-P
Supplementary Instructions

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Model Year 2015 forward
Place in motorcycle document package along with Rider’s Manual
Introduction

Congratulations on your agency’s decision to purchase BMW police motors. BMW is dedicated to providing you the most advanced police motor available, combining comfort, safety, the best warranty, low maintenance costs, function and form that meet the needs of your agency.

Part of our dedication is providing information to all agencies on an ongoing basis, to help keep you aware of the latest changes, improvements, service measures, etc. BMW has created a Police Motors Website at www.bmwmc.net for use by BMW motor riders and technicians, which contains repair information, installation instructions, wiring diagrams, service bulletins, parts listings, warranty and training information, as well as press releases, information on the latest options, new production announcements, etc. We encourage all agencies to register your email address with us so that we can provide you timely notification regarding new bulletins and other announcements.

We are also interested in your feedback. Please don’t hesitate to contact us regarding any suggestions for new options, changes or improvements you feel would make your BMW police motor even better. We welcome your correspondence sent to frstevens59@gmail.com.

Thank you for choosing BMW police motors!

Very truly yours,
BMW Motorrad USA

Frank Stevens
Authority Program Manager

Warning Labels:

Each BMW Police Motor must be equipped with a warning label attached to the center strip of the fuel tank cover near the seat or inside of the radio box lid in a highly visible area when the lid is opened that states:

Warning:

Do not use this motorcycle for high performance pursuit unless daily and periodic maintenance / inspection procedures for the complete motorcycle are strictly observed and recommended load limits and configurations are followed. The operator must be experienced and professionally trained in the skills of safely controlling powerful, high performance motorcycles under all circumstances. BMW NA provides servicing, maintenance, and configuration information which may be obtained by contacting an authorized BMW Motorcycle Retail Center.

Do not operate a BMW police motor without having first been instructed by your retailer or training officer on its operation.
MCS-PL01

Saddlebag Load Limits:

BMW police saddlebags are designed with no electronic equipment stored in either saddlebag to enables riders to utilize the full capacity of the saddlebag. A soft luggage brief-case is available from BMW under PN 71 60 7 704 109 to organize the items you carry in the saddlebag.

Warning:

Maximum load in each saddlebag is 15 lb. Do not exceed 80 mph with loads exceeding 15 lb. per saddlebag.
MCS-PL05

Engine Oil:

Selecting the proper motor oil for strenuous fleet operations is essential to maintain the long-life and low oil consumption expected from a BMW engine. BMW Motorrad ADVANTEC ULTIMATE 5w40 engine oil is premium quality synthetic four stroke motorcycle oil formulated with Pure Plus technology designed to ensure maximum power and performance, even under the most demanding fleet riding conditions. Always use BMW Motorrad ADVANTEC ULTIMATE synthetic engine oil from the 600 mile inspection forward, to fully protect the engine between 6,000 mile service intervals.
Police Radio:
Connections for the police radio are provided inside the radio box. A special connection plug is required – BMW PN 82 00 0 419 534, which comes complete with crimp terminals for large and medium gauge wire. Connections for battery power and ground are provided. The GMSF keeps connection powered up to 30 minutes after ignition-off.

Power Management:
The General Module Special Function (GMSF) manages all authority circuits, eliminating the need for fuses, controlling the shut-off time of each circuit as well as protecting the auxiliary battery from being severely discharged. All circuits will be opened 30 minutes after ignition is turned-off (some sooner) to completely eliminate any parasitic loads on the batteries during periods of non-use. **Never directly connect any accessories to the main or auxiliary battery!**

30 Seconds: ACCI, Radio Box Release, Gun Lock Release
30 Minutes: ACCII, ACCIII, Map Light, TDL, Radar, Radio Speaker Mute
30 Minutes: Radio Power, PTT1(F1), PTPA(F2), PTT2, Helmet Headset Interface

Video System Connections:
BMW has provided output connections for video system trigger signals to eliminate the temptation to cut into the wiring harness. The connections are on a 4-socket plug harness from the flasher unit as well as the radar plug.

Mating video plug w/socket is available under BMW PN 71 60 2 407 780
Mating radar plug w/socket is available under BMW PN 71 60 2 407 786

Optional Saddlebag Lights:
Saddlebag lights are activated via a proximity sensor located inside the clear window. Moving your hand or an object near the window will activate the light for approximately 15 seconds, after which the light will automatically turn OFF. Dirt or debris on the clear window may falsely trigger the light, so keep the window clean.

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Left Handlebar Controls:

Switch Layout:
The left handlebar switch contains the standard operating controls for the police motor. The horn switch also operates the siren air horn when the ignition is turned “ON”. A combination authority switch contains four rocker switches. These rocker switches control your PTT & PTPA, PTT2, Optional LED Driving Lights, Alley Lights and Take-Down Lights.

Push-to-Talk (F1):
The push-to-talk switch provides a +12v signal to the helmet headset interface plug, which can be utilized by helmet headset interface units to trigger the push-to-talk function in PVP and Setcom units. Alternatively, this switch can be programmed to latch-on and then off with the next press (via ISTA).

Push-to-PA (F2):
The push-to-public address switch provides a +12v signal to the helmet headset interface plug, which can be utilized by the helmet headset interface units to trigger the push-to-public address function in PVP and Setcom units. Alternatively, this switch can be programmed to latch-on and then off with the next press (via ISTA-P).

Note: The new generation handlebar switches utilized on the K52 models incorporate LIN-bus control units, meaning that there are no conventional analog signals created by the switches as in the past. Consequently, functions cannot be swapped between buttons.

Map Light:
Connections for the BMW map light option are pre-wired on the right handlebar switch cable bundle. The map light circuit is powered by the GMSF, providing power for 30 minutes after ignition is turned “off”.

Radio Speaker Connection:
Two stereo radio speakers are standard equipment on the R 1200 RT-P. A connection point to these 4Ω speakers is provided. Typical connections are for police radio and radar Doppler audio.

Accessory I, II, III Connections:
Three accessory connections located inside the radio box provide 12v and ground connections for the installation of video system, thermal printers, flashlight chargers, etc. Power is automatically controlled by the GMSF to each output and will automatically terminate power after ignition-off as follows:

Mating plug w/sockets is available under BMW PN 71 60 2 407 781

Mating plug w/sockets (3) are available under BMW PN 71 60 2 407 783
Accessory Connections:

Gun Lock Release:
The gun lock connection under the floor of the radio box (RH rear) is pre-wired with a two-pin plug to connect directly to the gun lock – no timer is needed as the GMSF provides a 30 second hold of the gun lock signal from the handlebar switch. Gun lock cable enters the compartment through the RH turn signal housing to protect cable from tampering.

Radar Connections:
The R 1200 RT-P is pre-wired for installation of moving radar. A four-conductor plug resides under the radio box with connections for:
- Radar Power (6A active >30 minutes after ignition off)
- Ground
- Vehicle Speed Signal (step-up resistor integrated in harness)
- Siren Video Trigger Signal

Lighter Socket:
A lighter socket located in the radio box provides +12v for use by phone chargers, etc. This circuit shares the 6A radar circuit and remains powered for 30 minutes after ignition-off.

Helmet Headset Interface:
An interface for PVP or Setcom helmet headset connections is provided to enable all needed connections in one plug.

PTT2 (unmarked)
Pressing the button up will momentarily activate a +12v signal to PIN 8 on the helmet headset interface plug, which can be used to trigger license plate readers, start video, etc. Alternatively, this switch can be programmed to latch-on and then off with the next press to activate traffic emitter systems, etc. (via ISTA-P). No LED indicator.

Optional LED Driving Lights:
The optional driving lights are activated by pressing down in the button shown at left. Driving lights will wig-wag in bright daylight when emergency lights are activated based on the amount of ambient light recognized by the dashboard light sensor.

Alley Lights:
BMW prewires the Alley Light feature including alley light switch, which allows the rider to illuminate the left or right front side-facing alloy LED light in steady-burn mode, providing illumination similar to the alloy light on marked cruiser. A blue indicator LED will illuminate when either left or right alloy light is selected. Rock the switch up for left light, middle position is “OFF”, down for right light. The alley lights can also be programmed to alternatively flash (along with the take-down lights) when the front emergency lights are activated. Set dip switch #2 to the “on” position to enable alternate alley light flashing.

Take-Down Lights:
BMW pre-wires the Take-Down Light (TDL) feature including TDL switch as standard equipment. Press the TDL switch up to activate left and right TDL’s in steady-burn mode, for use during violator stops or for additional day-time illumination. A green indicator LED will illuminate in take-down mode. The middle position is “OFF”. Rock the TDL switch down to activate wig-way mode. In this mode, the TDL’s will wig-wag opposite the flashing of the front emergency LED lights whenever the emergency LED lights are activated. A red indicator will illuminate when in wig-wag mode.

Caution: The purpose of Take-Down lights is to provide a high level of elevated light to illuminate the inside of a violator’s car or to illuminate the violator stop area at night. It is not recommended to operate the take-down light features (wig-wag or steady-burn) AT NIGHT WHILE RIDING as the intensity of these lights could be distracting to on-coming drivers. This feature is designed to operate while riding in daylight or when the rider deems the surroundings safe and appropriate for their use.

Alternating Headlight:
The alternating headlight feature (when activated by the dealer via the ISTA-P system) will wig-wag the high and low beam headlight (as well as optional LED Driving Lights) during high ambient light when the front emergency lights are activated. A light sensor in the dashboard will automatically disable this feature when ambient light levels become low. The wig-wag speed can be set: Off, 60 fpm, 90 fpm or 120 fpm. This feature is not synchronized with the emergency light flash patterns.
Right Handlebar Controls:

Switch Layout:
The right handlebar switch contains the standard operating controls for the police motor including starter button, engine emergency STOP switch, as well as optional heated handlebar grips and optional heated seat.

Siren Activation:
The BMW siren is operated by the momentary rocker switch with the trumpet emblem, but only when the ignition is “ON”. Pressing the button engages the siren into wail tone. Each subsequent press of the button advances to yelp, then hyper-yelp, then back to wail (California models should not have hyper-yelp activated). Press and hold to turn-off siren at any time. For a quick, momentary activation, simply press the button and then press and hold again (double-tap).

Emergency LED Lights:
This momentary rocker switch with the beacon emblem controls the switching of the emergency lights. Pressing the switch button engages the front and rear emergency lights. Each subsequent press of the button advances to rear only emergency lights, then front only emergency lights. The pattern repeats with each subsequent press of the rocker switch. An alternate activation pattern can be selected (via flasher dip switch #1) of rear only, front & rear, rear only, front only. Pattern repeats with each subsequent press of the button.

To turn-off the emergency lights, press and hold. An LED indicator display can be seen through the back of the right front LED emergency light housing, showing whether the front and/or rear emergency lights are activated.

California Title 13 Vehicles:
California agency motors should set the flasher dip switch #3 to “on” to activate steady-burn left front emergency warning lights as required by CA Title 13 vehicle code. Additionally, dealers must program the siren system (via ISPI) to eliminate hyper-yelp mode which is not allowed by CA Title 13 vehicle code.

LED Emergency Light System Flasher:
The emergency light system controller is located in the rear emergency light housing. The LIN-bus managed processor contains configurable features.

InterClear® alternate flash pattern selection button
Primary flash pattern selection button
Dip 4 – reprogramming (leave off)
Dip 3 – LH front steady burn (CA Title 13 on)
Dip 2 – Alley light flash w/emergency lights (on)
Dip 1 – Flash pattern group

Flash Patterns - all patterns are alternating (side to side)
1. Single Flash 60°
2. Single Flash 90°
3. Single Flash 120°
4. Single Flash 150
5. Single Flash 180
6. Double Flash 60°
7. Double Flash 90°
8. Double Flash 120°
9. Double Flash 150
10. Double Flash 180
11. Variable Flash 120°
12. Variable Flash 240 (default pattern)

* - Denotes California Title 13 compliant pattern

Tires and Pressures:
The R 1200 RT-P is fitted with tires that meet the California Highway Patrol and Los Angeles Police Department run-flat protocol. Additionally, the accurate police speedometer is calibrated for use with these specific tires. Fitting other BMW approved tires that are of a different specification may alter the accuracy of police speedometer. Never mount tires that are not approved for use on this model by BMW.

Front: 120/70 ZR 17 Michelin Pilot Road 4
Rear: 180/55 ZR 17 Michelin Pilot Road 4
Tire Pressures:
Front Tire: 37 PSI
Rear Tire: 42 PSI

Caution: Check tire condition daily. With the motorcycle on the center stand, examine the rear tire for nails / debris by spinning wheel with your foot.

Off-Season Storage:
The Rider’s Manual contains recommendations for storage. The motorcycle electrical system is protected via the General Module Special Function (GMSF), which eliminates all power to the authority equipment to eliminate all parasitic loads 30 minutes after the ignition is turned-off. Periodic maintenance of the two batteries is essential. Connecting the BMW battery charger to either accessory power socket will maintain the health of both AGM sealed batteries.
Fuses and Circuits:

The R 1200 RT-P main motorcycle charging circuit is protected by a 50A fuse link. Two other fuses blocks under the solo seat address main sub-circuits:

**Block A**
15A (slot 1) Instrument, ignition lock, diagnostic socket, radio box release.
7.5A (slot 2) Multifunction switch left, TPM, audio system.

**Block B**
15A (slot 1) Police radio circuit
7.5A (slot 2) Insert and remove fuse when ignition is ON (prior to starting) once symbol changes from flashing to steady to interrupt the ABS system for rodeo riding.
System resets after ignition cycle. See bulletin.

All remaining motorcycle systems are managed by the motorcycle General Module (GM), which contains electronic switches to protect the motorcycle circuits from an overload / dead short. No fuses are utilized in the branch motorcycle circuits – the GM acts like a “self-resetting circuit breaker” to protect each circuit from overload / short circuit.

**Auxiliary Battery Circuits:**
The auxiliary battery provides power to all authority equipment via General Module Special Function (GMSF). The GMSF controls auxiliary battery charge rate, monitors current consumption as well as controlling all circuit outputs. The GMSF will shut-down power to authority equipment if the auxiliary battery drops below 8.5 volts, protecting the battery from total discharge damage. The overall system voltage can be seen on the dashboard by selecting “Voltage” from the information display menu. **Never connect accessories directly to the auxiliary battery!**

Connection circuits are provided for radio, auxiliary rear LED warning lights, helmet headset interface, radar connection, fairing speakers, lighter socket, and three accessory connection plugs for computers, thermal printers, video systems, etc. **All connections must be made using the plugs provided – never connect directly to the auxiliary battery or the GMSF power control / monitoring capability will be defeated.**

Cruise Lights:
BMW provides Cruise Lights as standard equipment. The Cruise Light feature illuminates the forward facing and rear facing LED emergency lights at 10% power, providing less distracting illumination for marking / parking lights. The Cruise Light feature operates with ignition “ON”. Press the button up to turn the Cruise Lights “ON”. Press the button up again to turn them “OFF”. When Cruise Lights are “ON”, an amber LED indicator light will be illuminated. If the ignition is turned-off with cruise lights on, ignition will need to be “ON” to deactivate the cruise lights. After 30 minutes with ignition “OFF”, the cruise lights will automatically turn off.

**Lights “OFF” Switch:**
Press the button down to turn all lights “OFF” or activate all lights again during operation. This switch controls headlight and tailight, but not brake light (dashboard lights dim when activated). A green LED indicator notifies the rider that the lights are “OFF”. Note that the lights will momentarily turn-off when the starter is engaged (load shedding). This function will reset to “ON” after the ignition is cycled off. Note: When brake is applied, all brake lights and ID lights are illuminated.

Pace Lock
Pressing the button up locks the digital electronic police speedometer and displays the locked value on the LCD display. This locked speed value will be held through each ignition session. The digital electronic police speedometer is accurate within ±2 mph throughout the speed range of the motorcycle. This accuracy is ensured provided that the motor is fitted with the approved Michelin tires and inflated to the recommended pressure as there are no wear parts in the speed reading system (fully digital). Speed variation between worn and new tires is approximately .5 miles per hour.

**Radio Speaker Mute**
Pressing the button down will activate a relay that will mute the dashboard right hand radio speaker. The blue LED indicator light will indicate the speaker is muted. Pressing the button down again or turning-off the motorcycle will disengage this function and return the speaker to “ON”.

Rear Emergency Flasher Switch:
Pressing switch up will activate the rear emergency flashers (rear turn signals flash simultaneously along with optional rear side LED turn signals). This function operates with ignition “ON”. When operated, the front turn signals will still function normally to signal your intentions. Ignition must be “ON” to turn function off. Note LED indicator will not light when running with ignition off.

**Gun Lock Release: (unmarked)**
The momentary down side of the rear flasher switch is the gun lock release. Pressing the button down (with ignition “ON”) will energize the pre-wired lead connected to the gun lock. The GMSF provides a 30 second hold (no gun lock timer required) on this circuit after pressing the button to enable the officer to dismount the motor and remove the weapon from the rear prior to the lock re-engaging.
Break-In Recommendations:
Read and follow the Rider’s Manual recommendations, but for police agencies, we recommend that you ride the motor “briskly” for the first 600 miles, to ensure that the rings are well seated, since synthetic oil is used from the 600 mile service forward. The ideal situation would be riding on twisty roads where there is constant change in road speed, working the gearbox and throttle. This includes higher-speeds with frequent on-off movements of the throttle. Avoid full-throttle acceleration / load, but don’t be afraid to run the speed up to ensure good ring seating.
Note: Use BMW Super Synthetic Motor Oil in police motors starting with the 600 mile inspection.

Voltage Monitoring:
The alternator output / system voltage can be viewed while riding in the dashboard information display. This information is particularly useful after long violator stops, periods of frequent start & stop riding, etc. where the system voltage could be lowered. Reduce unnecessary power consumption whenever possible to provide more battery recharging capacity. Remember that the batteries cannot be fully recharged instantly. Recharging is a factor of time and amperage, so reducing electrical load and riding some miles after heavy discharges to ensure optimal battery life and service. Additionally, the auxiliary battery will not recharge if the main battery voltage is low. The motorcycle always preserves the main battery first, so reducing unnecessary load on the main battery (lights, driving lights, heated grips & seat) provides more power to recharge the auxiliary battery.

Side Stand:
The side stand is designed to hold the motorcycle on grades up to 9 percent without rolling off the stand, though you should always stop the engine when parked. The auxiliary battery system is designed to allow police accessories including emergency lights to operate during violator stops with the engine “off”, ensuring that the engine will restart after the violator stop.

When circumstances require, it is advised that the rider utilize the “parking brake”, which is stopping the engine while in gear, which will enable the motor to remain on the stand with engine “off” on much steeper grades without rolling off the stand.

Caution: The stand is designed to support the weight of the motorcycle while parked, not to support the additional weight of the officer mounting the motorcycle, particularly from the “low” side. Placing additional stress on the stand by mounting on the low side may cause damage to the side stand or the frame which would not be covered by the new motorcycle limited warranty.

Fuel Requirements:
The new overhead cam engine can operate on 89 AKI middle-grade fuel, though it should be noted that best performance will be obtained using 91 AKI premium fuel.

Accessory Power Sockets:
Two accessory power sockets are provided as standard equipment on each R 1200 RT-P model. The two sockets are fed from the same circuit. Both sockets will automatically shut-down 50 seconds after ignition off. Low wattage accessories may not be initially recognized – shutting down after a maximum of 15 min.

Front Socket:
The front power socket is connected to the main motorcycle battery through the main general module (GM), which limits the load on both sockets to 10A. The rear socket is on the same circuit and is also connected to the main battery via the main GM.

Rear Socket:
You may charge the batteries on the motorcycle from either socket. When the BMW 2.5A battery charger (BMW PN 77 02 8 551 897) is connected to either socket, the GMSF senses the connection and closes the auxiliary battery charging relay, thereby bridging the main and auxiliary batteries, charging them simultaneously. The 2.5A charger should be able to fully charge both batteries overnight.

Note: When charging through the accessory power sockets, the charger will not reach 100% charge due to the loads from the GMSF monitoring + closed charging relay, but complete charging will be achieved when in the upper 80% range.
Note: If a fused front accessory harness has been installed, connect the charger to the rear socket only or only the main battery will be charged.

Power Socket:
A DIN standard power socket is available from your BMW dealer under part number 61 13 8 060 106 for connection of non-BMW accessories to the front or rear BMW power sockets.

Accessory Connector Tools:
A pin & socket releasing tool with 25 spare socket terminals is available from the BMW parts system under PN 71 60 2 407 784 to release pin and sockets from the TE DUAC accessory connectors … a must for every dealer, agency or installer of accessories.