To charge the M5[™] Main Battery:

1. Remove the Non-rechargeable Backup Battery door from the SSPM, and disconnect and remove the Non-rechargeable Backup Battery.



2. Plug the charging cable into an AC power supply.



Caution: At the JMP6 header on the main board, ensure the jumper (JMP0002) is properly connected.

3. Plug a male connector from the charging cable into the female connector of the SSPM (on the bottom of the SSPM).



- 4. On the SSPM, quickly insert and remove a Diagnostics card from the EMV card reader to enter *Diagnostics* mode.
- 5. Press + Time (more time) / Time (less time) to scroll to *Voltages*, and ensure the meter enters "Charging" mode indicated by ^ on the display.



6. Continue charging the battery \geq 4 hours.

Caution: Do not leave the battery charging unattended / overnight. All battery-charging activities carry inherent risk and must be supervised at all times.

- 7. In \geq 4 hours, disconnect the meter from the charging cable.
- 8. Re-connect and replace the Non-rechargeable Backup Battery, and battery door.
- Check the battery voltages to ensure Non-rechargeable Backup Battery and the Rechargeable Main Battery both measure > 3100 mV. (See <u>How To Check the M5[™] Battery Voltage</u> for more details).
 - If the both batteries measure > 3100 mV, deploy the M5[™] SSPM for use or place it into Sleep state for future use.
 - If the Rechargeable Main Battery is < 3100 mV, repeat this procedure from the beginning, or send the SSPM to IPS Group, Inc. for servicing / replacement.
 - If the Non-rechargeable Backup Battery is < 3100 mV, send the SSPM to IPS Group, Inc. for servicing / replacement...

How To Replace an SSMP Backup Battery

This task topic discusses how to replace the IPS Group, Inc. SSPM backup battery.

The Backup Battery life of the SSPM is among the best in the industry. The battery is easily serviced in the field, requiring no tools to remove.

To replace the SSPM Backup Battery:

- 1. Remove the meter mechanism from the meter base housing.
- 2. Remove the battery compartment door from the left side of the meter mechanism.
- 3. Disconnect the wire harness, from the battery pack to the meter mechanism.



4. Using a new Backup Battery, connect the wire harness from the battery pack to the meter mechanism, replace the battery compartment door, and reinstall the meter mechanism into the meter housing.

- 5. Quickly insert and remove a Diagnostics card from the card reader to enter *Diagnostics* mode.
- 6. Press \sqrt{OK} > X Cancel to enter *Diagnostics* mode level 2.
- 7. Press + Time (more time) / Time (less time) to select COMMS Test.
- 8. Press \sqrt{OK} to enter the *COMMS Test* menu, to set the meter to the current time.
- 9. Press + Time (more time) / Time (less time) to select Replace Bat.
- 10. Press \sqrt{OK} to enter *Replace*, then press Time (less time) to *confirm* the battery replacement.

The battery replacement *Date* is set to the current time, and the *Use* data resets to zero (0) days.

11. Press X Cancel repeatedly to exit Diagnostics mode.

How To Force an SSPM to Update

This task topic discusses how to force the IPS Group, Inc. SSPM to update.

The SSPM receives firmware updates and configuration updates through the DMS. At initial installation, the SSPM is configured to call-into the DMS for updates at a specific events and / or time interval. To test an SSPM's communications, or to initiate an immediate updated, it can be forced to call-in at any time (before the next specified call-in interval).

To force an SSPM to update:

- 1. On the SSPM, quickly insert and remove a Diagnostics card from the card reader to enter *Diagnostics* mode.
- 2. Press + Time (more time) / Time (less time) to scroll to Comms Test.
- 3. Press √ **OK** to *Start* the communications test. The SSPM LCD shows *GSM Start*.

The test may require a few minutes to complete as the SSPM attempts to connect to the DMS for firmware, configuration, and time stamp updates.

Note: Do not press any buttons on the keypad until the communications test is complete, as this may interrupt the test session. Press **X Cancel** at any time to cancel the communications test, and return to the *Diagnostics* menu.

4. Once the communication test is complete, and the LCD shows *GSM Close*, press **X Cancel** repeatedly until the meter returns to normal operating mode.

Glossary

<u>D</u>_____

DMS

Data Management System

E

EMV

Europay, MasterCard, and Visa

F

FCC

Federal Communications Commission

G

GPRS

General Packet Radio Services

GSM

Global System for Mobile Communications

<u>L</u>_____

LCD

Liquid Crystal Display

LED

Light Emmiting Diode

Li-SOCI2

Lithium-Thionyl Chloride

Ν

NFC

Near Field Communication

Р

PCBA

Printed Circuit Board Assembly

R

RFID

Radio Frequency Identification

S

SIM

Subscriber Identification Module

SSPM

Single-Space Parking Meter

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