

IMPRES™ & IMPRES™ 2 Self-Calibration

What is “self-calibration” for IMPRES & IMPRES 2?

Conventional IMPRES & IMPRES 2 batteries rely on docking into IMPRES & IMPRES 2 charger systems to perform the initial “calibration” the first time it is used (initialization) and monthly calibrations over the batteries lifetime.

New generation IMPRES & IMPRES 2 batteries come with the self-calibration feature, which can be identified through a logo on the battery label. With this feature, the calibration process takes place within the self-calibrating battery itself in real-time, without having to dock into IMPRES & IMPRES 2 chargers. To enjoy this feature, the self-calibrated batteries have to be used in conjunction with IMPRES & IMPRES 2 chargers with software V2.05¹ and above.

Charger LED for initialization or calibration on conventional IMPRES & IMPRES 2 batteries without self-calibration:

	● → ● → ☀ → ●
Charger LED	Steady Amber Steady Red Flashing Green Steady Green
(Process)	(Calibration) (Charging) (Charged>90%) (Charged)

NOTE: This process may take up to 12 hours or more to complete, depending on the state of charge and capacity of the battery.

Charger LED when charging IMPRES & IMPRES 2 batteries with self-calibration:

	● → ☀ → ●
Charger LED	Steady Red Flashing Green Steady Green
(Process)	(Charging) (Charged>90%) (Charged)

NOTE: These self-calibrated batteries do not rely on chargers to perform calibration (chargers have to be with software V2.05¹ and above to skip over the charger calibration process indicated by steady amber)

The accuracy of the battery’s indication will progressively improve after the initial use. Motorola recommends completing a couple of full charge cycles to achieve better accuracy.



What is the purpose of IMPRES & IMPRES 2 calibration?

The Calibration process on IMPRES & IMPRES 2 batteries ensures all of the critical characteristics of the batteries are up-to-date and accurate over time, providing benefits such as

- extending battery cycle lifes
- provides accurate battery capacity information regardless of battery age.
- enables effective [IMPRES Battery Fleet Management \(BFM\)](#) by collecting critical battery data.

Why does the charger software version matter?

Only IMPRES & IMPRES 2 chargers with software version 2.05¹ and above are able to identify IMPRES & IMPRES 2 batteries with self-calibration, and effectively skip over the long hours of the calibration process (steady amber on charger LED). Single-Unit Rapid Rate Charger, Travel Charger and Vehicular Charger are not supported¹.

What are the benefits of IMPRES & IMPRES 2 self-calibration?

With IMPRES & IMPRES 2 self-calibration batteries, users no longer need to go through the traditional long hours of calibration process in IMPRES & IMPRES 2 chargers (steady amber LED). This enables faster deployment and avoids battery downtime every month.

What if users insert IMPRES & IMPRES 2 self-calibration batteries into chargers with older software?

Chargers with older software versions are not programmed to identify self-calibration batteries, therefore will perform the calibration process the same way as older generation batteries. When this happens, a steady amber indication will be seen on the charger and the traditional long hours of calibration process will start, which may take up to 12 hours. This does not cause any harm to the IMPRES & IMPRES 2 self-calibration batteries, however it may cause unnecessary battery downtime to the users.

How can users identify the IMPRES & IMPRES 2 charger software version and perform software upgrades?

Always refer to the correct charger user manual to learn how to identify the charger software version and perform charger software upgrade. Charger user manual can be accessed and downloaded through [MSI Learning Portal \(LXP\)](#) by searching the charger part number. Single Unit Charger software cannot be upgraded. The MSI Charger Reprogrammer is the software tool required to update the charger firmware. The MSI Charger Reprogrammer software can be downloaded through [this link](#).

Which batteries have IMPRES & IMPRES 2 self-calibration?

List of batteries to-date:

MOTOTRBO R7¹

PMNN4807: IMPRES LIION IP68 2200mAh

PMNN4809: IMPRES LIION IP68 2850mAh

PMNN4810: IMPRES LIION TIA4950 IP68 3200mAh

MOTOTRBO R5

PMNN4888: IMPRES LIION IP67 2200mAh

PMNN4889: IMPRES LIION IP67 3200mAh

PMNN4890: IMPRES LIION TIA4950 IP67 3200mAh

MOTOTRBO XPR3000 series | XPR7000 series | DP2000 series | DP4000 series | XiR P6000 series | XiR P8000 series | DEP500 series | DGP5000 series | DGP8000 series¹

PMNN4491_*: IMPRES LIION IP68 2100mAh

* Self-calibration is available in PMNN4491D and later. Self-calibration is not available in PMNN4491C, PMNN4491B and PMNN4491A.

APX N30 | N50

PMNN4813: IMPRES 2 LI-ION IP68 2850mAh

PMNN4815: IMPRES 2 LI-ION IP68 3200mAh (UL)

APX N70

PMNN4816: IMPRES 2 LI-ION IP68 3200mAh

PMNN4817: IMPRES 2 LI-ION IP68 4400mAh

PMNN4818: IMPRES 2 LI-ION IP68 3650mAh (UL)

APX NEXT XN

PMNN4812: IMPRES 2 LI-ION IP68 3400mAh

TETRA MXP7000

PMNN4830: IMPRES 2 LI-ION IP68 5600mAh

PMNN4877: IMPRES 2 LI-ION IP68 5600mAh

TETRA TPG2200 HiCap

PMNN4586: IMPRES 2 LI-ION 3600mAh





- ¹ MOTOTRBO R7 IMPRES batteries comes with self-calibration feature when used with IMPRES Single-Unit Charger and IMPRES 2 Multi-Unit Fast Charger (SW ver V2.01 and above) listed under Charging Solutions for MOTOTRBO R7. Single-Unit Rapid Rate Charger, Travel Charger and Vehicular Charger are not supported.

[Learn more](#)

MOTOTRBO PMNN4491_ (version D and later) battery comes with self-calibration feature when used with IMPRES Single-Unit Charger and IMPRES 2 Multi-Unit Fast Charger (SW ver V2.05 and above) listed under Charging Solutions for MOTOTRBO XPR3000 series | XPR7000 series | DP2000 series | DP4000 series | XiR P6000 series | XiR P8000 series | DEP500 series | DGP5000 series | DGP8000 series. Single-Unit Rapid Rate Charger, Travel Charger and Vehicular Charger are not supported.

[Learn more](#)

Learn more at motorolasolutions.com



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. motorolasolutions.com

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