



impres™ Smart Energy System

MOTOREADY



MOTOROLA

intelligence everywhere™

Behind every Motorola radio is a product as **simple** and essential as communication itself: the battery. Motorola's **impres™ Smart Energy System** — a revolutionary battery-charging and reconditioning solution — **automates battery maintenance, optimizes cycle life and maximizes talk time** so your radio system will be charged and ready to go when you need to communicate.

When communication is absolutely essential, the **impres Smart Energy System helps ensure Motorola radio systems will be ready.**



Work... Critical

Time... Extremely Limited



impres. Smart. Automates battery maintenance...

The traditional *one size fits all* approach to manual battery maintenance often leads to inefficient processes that fail to address battery problems and result in wasted cycle life and wasted time spent unnecessarily reconditioning batteries. Manual battery maintenance also often requires dedicated and trained staff and may still result in wasted and unnecessary reconditioning cycles.

With **impres**, battery charging and adaptive reconditioning are automated.

No manual battery maintenance is required, so you don't need a dedicated service technician or additional reconditioning hardware.

With plug-and-play single and multi unit chargers, **you can decentralize battery maintenance by assigning chargers to individual users;**

it's no longer necessary to allocate specific personnel and reconditioning equipment to handle battery maintenance.

Although complete smart features are realized only when using **impres** batteries and chargers, together **impres** chargers can also handle legacy batteries; in fact, the multi unit chargers can simultaneously charge legacy *and* **impres** batteries.

Optimizes cycle life...

Using alternating current (negative pulse) and low current trickle charging, the *friendly* charge algorithm of the **impres** Smart Energy System keeps batteries cooler and eliminates heat build-up during the charge cycle.

The battery **may be left in the charger for extended periods** without damaging heat build-up, while remaining at or near full-charge. This makes **impres** ideal for those applications that require equipment in a *ready* state at all times.

In addition, if partially charged batteries are briefly removed from the charger, they can be replaced and **the charging cycle picks up right where it left off.**





High Performance... Always Expected

Maximizes talk time...

...by proper initialization. Batteries sitting dormant for a long time may not achieve maximum capacity after a simple charge. Initialization helps ensure batteries achieve maximum charge capacity and talk time. **impres** batteries are automatically initialized by the **impres** charger; batteries not charged in an **impres** charger for at least 30 days will be automatically re-initialized when replaced in the charger, helping to ensure that batteries will yield maximum talk time when put back into service.

...by alerting you concerning battery capacity and charge status.

With display chargers now available with the **impres** Smart Energy System, you'll be able to see — real-time and at-a-glance — the battery's capacity and amount of charge.

...by reconditioning. The **impres** Smart Energy System uses a patented communications protocol to facilitate adaptive reconditioning that overcomes *memory effect* that results when batteries are continually charged before being fully discharged. The **impres** Smart Energy System adjusts the reconditioning frequency to match need and usage patterns. No longer will you have to manually track and record battery usage — or make wild guesses about when it's time to recondition. With automatic and adaptive reconditioning, you eliminate guesswork and the time wasted reconditioning batteries prematurely.

A battery with brains...

To optimize performance, the **impres** battery stores usage information that's analyzed by the charging and reconditioning system. **By assessing unique usage patterns, the **impres** Smart Energy System helps your organization get the most out of every battery — and every communications system.**

All **impres** batteries can be reconditioned without removing them from the radio. No adapter plates are necessary; simply put the radio in the charger, assured that when you remove it, the battery will be fully charged and ready to go. **An *End of Service* indicator lets you know when the battery has reduced capacity and may need to be removed from service.**

Because **impres** batteries are automatically adaptively reconditioned, *memory effect* is controlled, enabling consistently optimal performance.



Communication... Absolutely Essential



A charger that communicates...

Motorola's **impres** multi unit chargers are now available with a two-line LCD display module that communicates important information including:

Battery current capacity and voltage while charging — **in real time**

Time remaining to complete rapid charging, **so you know when your battery will be charged and ready to go**

Current battery status, such as **charging or reconditioning information**

The battery's **unique serial number, kit number and chemistry**

An alert when fewer than 6 cycles are required until the next reconditioning, **so you can plan ahead**

Staying power...

All **impres** batteries are built to last. When used with **impres** chargers, they carry extended capacity warranties that last six months longer than Motorola Premium battery warranties.

When batteries begin to exhibit reduced performance characteristics, an *End of Service* indicator on the charger display tells you it may be time to remove the battery from mission critical service. Motorola's **impres Smart Energy System** is designed to help you charge batteries to maximum capacity — so they have the power your radio systems require to help you do the job.

impres™ Charger Specifications

FOR THESE RADIO PLATFORMS

HT1000/MTS2000, XTS3000/3500/5000, and Saber/Astro Saber Series Portables



PRODUCT NAME

impres Single Unit Charger **impres** Multi Unit Charger **impres** Multi Unit Charger w/ Display Modules

MODEL NUMBER

WPLN4111AR WPLN4108BR WPLN4130A

DIMENSION (H" x W" x D")

3.23" x 3.82" x 7.88" 6.0" x 17.5" x 11.5" 6.0" x 17.5" x 11.5"

WEIGHT (OZ)

1.38 lb (22 oz) 8.25 lb (132 oz) 8.55 lb (136.8 oz)

POWER DESCRIPTION

(input voltage range, freq. range)

90–265Vac, 50/60 Hz 90–265Vac, 50/60 Hz 90–265Vac, 50/60 Hz

TYPES OF BATTERIES

NiCd (HNN9028AR, HNN9029AR-FM, HNN9031B, HNN9032B-FM, HNN9033B, HNN9034B-FM)
NiMH (NNTN4435B, NNTN4436B-FM, NNTN4437B-FM RUGGED), Li-ion (NTN9862A)

CHARGING METHODS

CCDT / Negative Pulse (NiCd/NiMH) CCCV (Li-ion)

CHARGING CURRENT (max)

1.5 A 1.5 A 1.5 A

DISCHARGING CURRENT (max)

2.5 Watts 2.5 Watts 2.5 Watts

OPERATING TEMPERATURE RANGE

0–50° C 0–50° C 0–50° C

WARRANTY

2 Year 2 Year 1 Year

ADD-ON CHARGER DISPLAY MODULES

RLN5382A - Individual impres Charger Display Module for impres Multi Unit Chargers Version 1.3 or later
RLN5591A - Individual impres Charger Display Module for impres Multi Unit Chargers Version 1.2 or earlier

FOR THESE RADIO PLATFORMS

HT Professional Series Portables



PRODUCT NAME

impres Single Unit Charger **impres** Multi Unit Charger **impres** Multi Unit Charger w/ Display Modules

MODEL NUMBER

WPLN4182A WPLN4187A WPLN4192A

DIMENSION (H" x W" x D")

2.2" x 3.8" x 5.8" 6.0" x 17.5" x 11.5" 6.0" x 17.5" x 11.5"

WEIGHT (OZ)

0.44 lb (7 oz) 7.95 lb (127.2 oz) 8.25 lb (132 oz)

POWER DESCRIPTION

(input voltage range, freq. range)

90–264Vac, 50/60 Hz 90–265Vac, 50/60 Hz 90–265Vac, 50/60 Hz

TYPES OF BATTERIES

NiMH (HNN4001A, HNN4002A-FM), Li-ion (HNN4003A)

CHARGING METHODS

CCDT / Negative Pulse (NiCd/NiMH) CCCV (Li-ion)

CHARGING CURRENT (max)

1.25 A 1.5 A 1.5 A

DISCHARGING CURRENT (max)

3.5 Watts 2.5 Watts 2.5 Watts

OPERATING TEMPERATURE RANGE

0–50° C 0–50° C 0–50° C

WARRANTY

2 Year 2 Year 1 Year

ADD-ON CHARGER DISPLAY MODULES

RLN5382A - Individual impres Charger Display Module for impres Multi Unit Chargers Version 1.3 or later
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