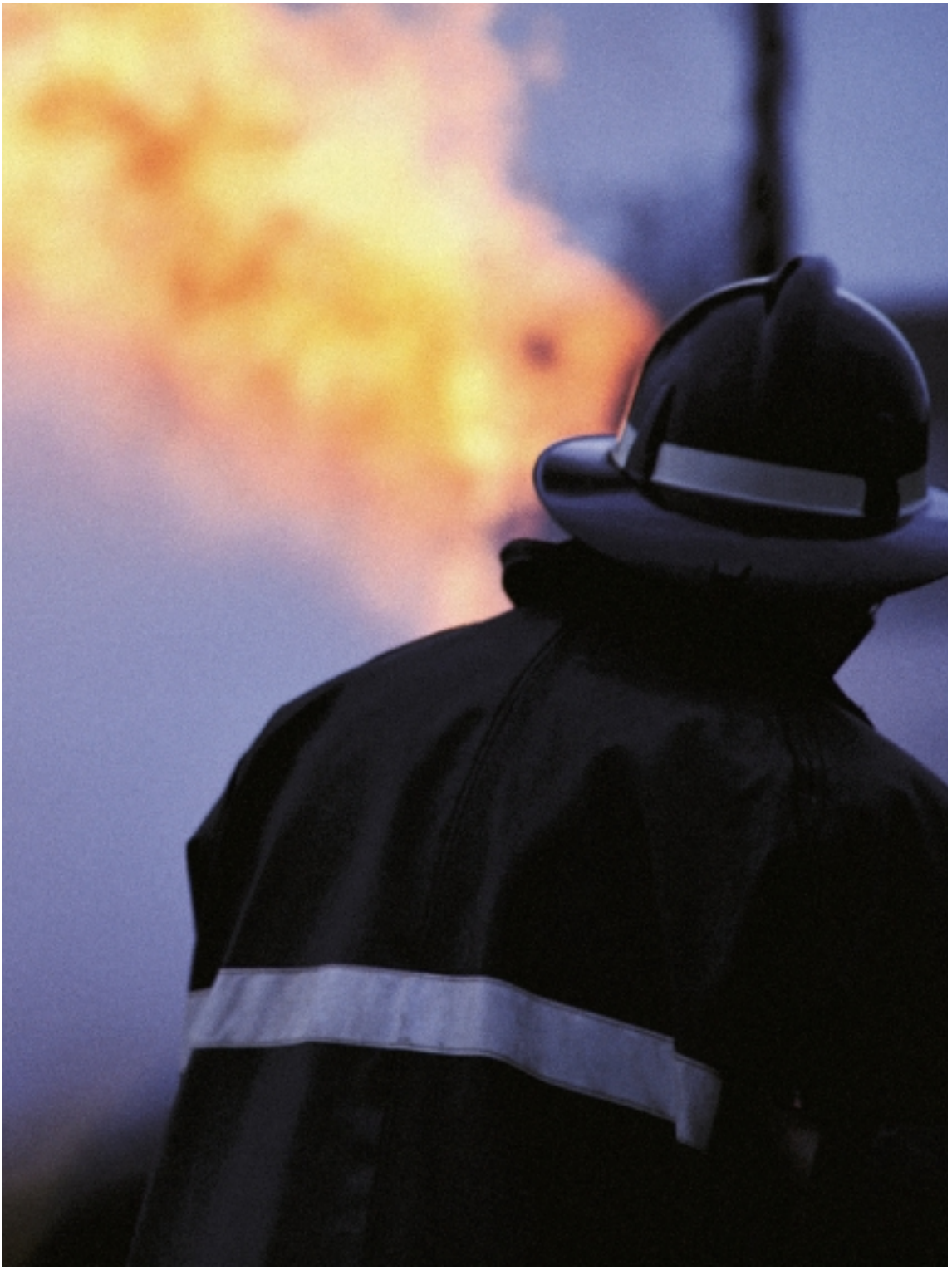
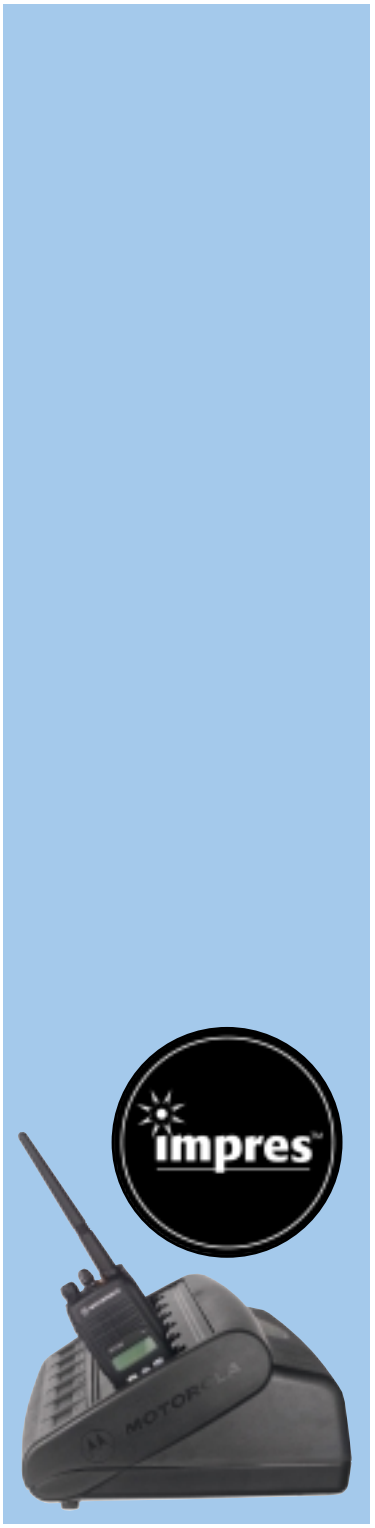
impres™ Smart Energy System

For Professional Series Radios

MOTOROLA





impres™ Smart Energy System

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, optimises cycle life and maximises 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.

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 decentralise 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 realised 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.

Optimises 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 .**

Maximises talk time …

…by proper initialisation.

Batteries sitting dormant for a long time may not achieve maximum capacity after a simple charge. Initialisation helps ensure batteries achieve maximum charge capacity and talk time. impres batteries are automatically initialised by the impres charger; batteries not charged in an impres charger for at least 30 days will be automatically re-initialised 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.

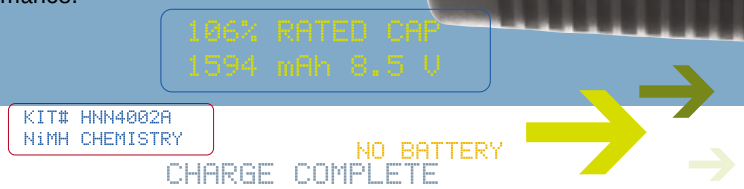
…by reconditioning.

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 optimise performance, the impres battery stores usage information that's analysed by the charging and reconditioning system. **By assessing unique usage patterns, the impres Smart Energy System helps your organisation 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.



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. With real-time information displayed on current charge status (charging or reconditioning), battery's unique serial number, part number, chemistry and a visual alert to inform you on the next reconditioning cycle, you are now in full control.

The individual modular display allows users to retrofit the non-display Multi-unit charger to have either 1 to 6 display according to user's budget and operational needs.

Staying power ...

All impres batteries are built to last.

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.

FOR WARIS RADIO PLATFORMS

Professional Series Portables:

GP328, GP338, GP338-LS, GP329, GP339, PTX700, PTX760, PTX780, ATS2500, MTX900, MTX960



impres CHARGER

PRODUCT NAME		
impres Single Unit Charger	**impres** Multi Unit Charger	**impres** Multi Unit Charger w/ Display Modules
MODEL NUMBER		
WPLN4182 – 110V US Plug WPLN4183 – 230V UK Plug WPLN4184 – 230V EU Plug WPLN4185 – 230V AUST Plug	WPLN4187 – US Cord WPLN4188 – UK Cord WPLN4189 – EU Cord WPLN4190 – AUST Cord WPLN4145 – KOREA Cord	WPLN4192 – US Cord WPLN4193 – UK Cord WPLN4194 – EU Cord WPLN4195 – AUST Cord WPLN4146 – KOREA Cord
DIMENSION (L x W x H)		
147 mm x 97 mm x 56 mm	292 mm x 445 mm x 152 mm	292 mm x 445 mm x 152 mm
WEIGHT (gram)		
200	3606	3742
POWER SOURCE (input voltage range, freq. range)		
18Vdc, 15W, 50/60 Hz	90–265Vac, 50/60 Hz	90–265Vac, 50/60 Hz
POWER OUTPUT RATING (max)		
14.5W	25W per pocket	25W per pocket
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	3.5 Watts	3.5 Watts
OPERATING TEMPERATURE RANGE		
0–50° C	0–50° C	0–50° C

OPTIONAL ACCESSORIES (for Multi-unit)

RLN5382 - Retrofit to Multi-Unit Non-Display Models
NLN7967 - Wall Mount Bracket
6880309L66 - Service Manual



impres BATTERIES

MODEL NUMBER		
HNN4001	HNN4002	HNN4003
CHEMISTRY/CAPACITY (typical ave.)		
NiMH 1900 mAh	NiMH 1800 mAH Intrinsically Safe (FM)	LiIon 2000 mAH
NON-SMART EQUIVALENT		
PMNN4009/HNN9009	HNN9010	–
SIZE (L x W x H)		
55 x 125 x 23 mm	55 x 125 x 23 mm	55 x 125 x 23 mm
WEIGHT (gram)		
270	270	141

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