



# Intelligent In-Vehicle Charger For Two-Way Radio Batteries

The Logic in-vehicle charger, or LEVCA, is an innovative and ultra-rugged product designed for public safety, emergency, construction, and utility vehicles. It provides a number of advanced charging features, yet is easy to install and use. Key features include:

- Intelligent charging that maximizes battery shift life and overall cycle life.
- High impact and vibration tolerant contacts for greater reliability. (See alpha contact™ information)
- Highly compact and low profile which allows placement in vehicles where space is limited.
- Charges a battery while on the radio or separately.
- Tie-down strap securely holds a radio or battery and is easy to attach and easy to release.
- Charging electronics and radio holder are integrated in a single unit to simplify permanent installation or for “plug-and-play” use.
- LEVCA chargers are available for Motorola, Kenwood, EF Johnson, Tait, Hytera, Icom, and other two-way radios.
- Three-year warranty.

## The LEVCA's Intelligent Charging

The LEVCA provides significant benefits through a technology called Battery Acceptance Charge™ or BAC™. BAC uses an advanced pulse charging method to determine the maximum amount of energy a battery can accept. During the charging process there are short rest periods between pulses, which allow the chemical actions in the battery to stabilize. After stabilizing, the open circuit voltage (OCV) is sampled and this data is used to determine the maximum charge current without disturbance from other sources. The rest periods also minimize the generation of gases and charge related temperature increases, allowing batteries to remain cooler while charging.

From the OCV sample data and sensing how the chemistry in the battery is reacting, the LEVCA calculates the maximum charge a battery is able to accept. This charging method is also able to account for any poor performing cells and through a process called cell equalization, adjusts

the charge to ensure the maximum possible capacity is achieved. Buy continually pulsing, analyzing, and adjusting the charge, the LEVCA is able to maximize the shift of life of the battery and overall cycle life.

After a battery is fully charged and the charge has terminated, the LEVCA is constantly measuring pack capacity such that when self-discharge occurs, the charge process automatically restarts. This ensures that a battery left in the charger for extended periods is maintained at full charge.



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## Specifications For Logic In-Vehicle Charger

Dimensions (L x W x D)	113mm x 66mm x 57.3mm / 4.4" x 2.7" x 2.3"
Weight	245g / 0.5 lbs.
Compatible battery chemistries	Li-Ion / LiPo or NiCd / NiMH (see product label)
Battery voltage range	7.2V – 10.8V
Operating temperature	0° C - 45° C / 32° F - 113° F
Storage temperature	0° C - 65° C / 32° F - 149° F
Charger input	10V - 30V DC @ 1.0A (minimum)
Power supply outlet	12V - 24V DC
Charge rate / output voltage	Up to 1000 mA
Contact type	High impact and vibration tolerant <i>alpha contacts</i> ™
Contact cycle life	20,000+ insertions
Radio holder – material	Black acetyl
DC power cable	16 AWG / 3A in-line fuse / 3.0m (9.8')
Status LED	Tri-color (red/amber/green)

### Accessories

A heavy duty floor mounting bracket (LEVCA-MHD) and a multi-directional dash mounting bracket (LEVCA-M) are optional accessories available for LEVCA chargers.



The DC power cable (LEVCA-HW) features a locking connector plug and is included with the LEVCA.



With the optional vehicle power adapter (TWC6M-VPA), the LEVCA can be used "plug-and-play".



### High Impact And Vibration Tolerant: alpha contact™



The contacts incorporated in the LEVCA are highly robust, corrosion resistant, and maximize positive contact with the radio, even when traveling over rough roads. In addition, the contacts have a cycle life rating of more than 20,000 battery insertions, far superior to the typical in-vehicle charger. The alpha contact™ is one of many reasons you can expect LEVCA chargers to perform reliably.

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