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## Charge Method

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**Note:** this document assumes that the user has sufficient experience to navigate and edit C-codes on the C7000.

The Charge Method (only for NiCd and NiMH chemistries) in the Extended C-code is used to optimize battery charge efficiency. These charge methods are applied to the charge and trickle charge cycles.

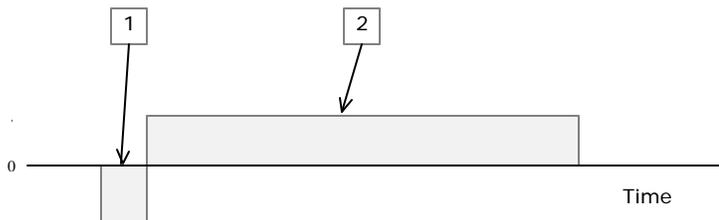
Three types of charge methods are available:

- Rev Load xx% where xx% is from 5% to 12%
- No Rev Load
- DC Charge

### a. Rev Load xx% (Reverse Load)

A Reverse Load applies discharge pulses to the charge current to help recombine gases generated during charging and helps cool the battery. This feature allows a battery to be charged at a higher rate reducing the charge time. The waveform is made up of 2 parts:

- Reverse Load pulse.
- Charge pulse



The magnitude of the reverse load pulse is the battery charge rate multiplied by the reverse load percentage. For example, a NiCd 1800mAh battery set at 1800mA charge current (i.e. CH = 1.00C) and at Charge Method: Rev Load 9% will have reverse load pulses of 162mA ( $1800 \times 0.09$ ).

The best results have been obtained using a setting of 9%. Use lower settings (Rev Load 5%) for NiCd batteries with ratings of 500mAh or less.

### b. No Rev Load (No Reverse Load)

The reverse load pulse is disabled if the No Reverse Load charge method has been selected. The waveform will be a set of charge pulses. This may be used for batteries that prevent reverse polarity current on their charge contacts.

### c. DC Charge

DC charging, as the name implies, has no reverse load pulses. Use this setting for batteries that cannot accept a pulse charge. For example, Intrinsically Safe Batteries with a low rated internal fuse. The C7000 will indicate if a reverse load charge cannot be applied: 12x series of fault codes will appear with the most common being 121, 122 or 129.

The battery may experience some heating if DC Charge is used. In these cases, reduce the CH setting in the C-code.

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