

Rechargeable Batteries - article #2 – battery chargers

Last month we extolled the values of the low self-discharge NiMH rechargeable batteries. This month we'll discuss issues with charging NiMH batteries. Many complaints with rechargeable batteries are the result of improper charging. Common charging mistakes include: 1) improper battery arrangement in the charger, 2) charging batteries of different capacities at the same time, 3) improper charging rate, 4) overcharging.

Improper battery arrangement can be solved simply by reading the instructions that came with your battery charger. Battery chargers usually have the capacity to charge 4 batteries at one time, and some can charge more than that. If you only need to charge 1 or 2 batteries, your charger may require a particular arrangement to accomplish this. For example, many chargers will not allow only 1 battery to be charged - you may be required to charge batteries in pairs. If you are only charging one pair in a charger that handles 4 or more batteries, you may be required to use particular slots, e.g. batteries might have to go in the left most positions. Many chargers on the market today don't care - all slots are truly independent and any number of slots can be used at any time. Check the manual for your charger!

In general, batteries should be charged only with batteries of a similar capacity. This is also a topic that will likely be addressed in your battery charger instructions. A few chargers on the market have truly independent charging slots, so batteries of different capacities can be safely charged at the same time. However, it is common in less expensive chargers for some of the charging slots to be 'connected'. For example, if your charger has 4 slots (A, B, C and D), the charger may require all the batteries being charged to be of the same capacity. Another possibility is that slots A and B may require batteries of a similar capacity and slots C and D require batteries of a similar capacity, but the batteries in slots A and B can be of different capacity than the batteries in slots C and D. Failure to follow these instructions can cause overcharging of the lowest capacity batteries. Overcharging will damage the batteries. Again, consult your charger instructions to learn the requirements for your charger.

Charging times for NiMH battery chargers sold today vary widely. Some chargers are advertised to recharge batteries in 15 minutes, some are designed to charge in 1 hour, and others are "overnight" chargers, meaning that it takes several hours to recharge batteries. When the quick (15 minute) chargers first came out, they worked only with special batteries that were designed for charging this quickly. However, several quick chargers are sold today that are advertised to work with any NiMH battery. So ... quicker is better, right? Is there any reason NOT to get the fastest charger you can find?

Well, opinions vary about the effects that quick charging has on the life of a NiMH battery. The quicker a battery charges, the more heat gets generated within the battery. Many folks believe the excess heat will decrease the overall life of your batteries, meaning that you will get fewer recharges before the battery fails. Other people believe the newer quick charge methods don't develop as much heat as older quick charger did and the impact on battery life is not significant enough to outweigh the advantages of quick charging. Safe advice - get a charger that charges only as quickly as needed. If you don't need to charge batteries in 15 minutes, get something slower. Also keep in mind that some of the quick chargers lack other features, like automatic shutoff or trickle charging. Though it would be irresponsible to say that faster charging will surely damage your batteries, it is safe to say that slower charging generates less heat and eliminates uncertainty in this matter. Some of the more expensive chargers on the market let you set the charging rate, so you can have the best of both worlds. Overcharging is likely the most common cause of battery damage and is usually the result of a poor quality charger. There are two broad categories of chargers - "smart" chargers and "dumb" chargers. 'Smart' chargers have the ability to detect when the batteries are fully charged and then drop off to a maintenance, or 'trickle' charge. A trickle charge is a very low charge that maintains the charge on your fully charged batteries without damaging them. 'Dumb' chargers either won't detect the end of charge, or won't shutoff or drop to trickle charging when a full charge is detected. This is common with many 'wall wort' chargers (a nickname for the small units that hang off of an AC outlet - no AC cord). These inexpensive chargers are often bundled with batteries and sold for a price not much higher than the batteries themselves cost. Read the directions for your charger. If it instructs you to remove the batteries or unplug the charger after charging is complete, the charger is likely a 'dumb' charger. Very few people are always available to watch a charger and unplug it when charging is complete, so 'dumb' chargers are a poor option that cannot be recommended. If you see a charger in the store but are not sure if it is a smart charger, write down the model number and research it on the Internet before buying. You can almost always find the user manual online.

Finally, we'll discuss some advanced features found on better chargers. Some chargers have modes to fully discharge batteries before starting to charge them. Though NiMH batteries don't have the memory issues often associated with NiCad batteries, this is still recommended occasionally to keep the batteries working over their full voltage range. Another feature on better chargers is a refresh mode. This mode will cycle the batteries between full charge and full discharge, monitoring the amount of charge they can take on each charge cycle. The refresh cycle will continue as long as the charger detects improvement in the amount of charge the battery can hold. This is great for aging batteries or batteries you feel may have been abused by poor charging practices in the past.

Next month we'll wrap up this series of articles with some miscellaneous battery topics, including proper disposal.

THE BRANCH

JANUARY 2010

CHRIST LUTHERAN CHURCH

616.532.2774

from the ... CLC Council

Last month, your council wrote the letter on the front page of The Branch. In that communication, we referred to a letter received by council from a group of members who were concerned by the ELCA's social statement. If you would like to see their letter, please contact the church office at 532-2774.

Important Information!

This year's annual meeting will be taking place on January 24th, but the format will be different from the last several years.

We will have ONE SERVICE on January 24th at 10:00 a.m.
and the annual meeting will follow that worship service.

We will then spend some time in fellowship as a lunch will take place after the annual meeting. Cold cuts and drinks will be provided, but if you are able, please bring a dessert or side dish.

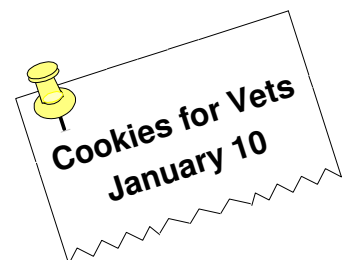
We look forward to seeing all confirmed members in attendance at this meeting as many important topics will be discussed.



January 2010 Calendar

can be found at the

CLC website: www.christlutheranwyoming.org
(located under the News and Events)



Gary Sironen - Minister of Music

God's Love Never Changes

Change is hard. I'm going to miss Pastor Tim and his family. I've enjoyed working with him as a partner in faith, and I've respected him as a pastor, a colleague and a friend. I'll miss Lori, Christine and Erica, having worked with each of them as musicians. I know God is moving them in a new direction to accomplish his will, and I trust God will also move us as a congregation in new directions to accomplish his will.

Change is hard. But change is necessary. Without change, there is no growth and no life. More than 2,000 years ago, a change occurred that few noticed except for some shepherds, some wise men, a paranoid king, and a young couple who were not yet married. Over the next thirty-some years, God gradually revealed the nature of that change, which led to the ultimate change – victory over sin and death and the beginning of new life. God didn't have to do that, but that change was necessary because God's love for us never changed and never changes.

During this season of Epiphany, which begins January 6 and lasts until Ash Wednesday, we will re-discover in our Scripture lessons the changes that were revealed to God's people about who Jesus was and why he was, and is, present among us. God will also begin revealing to us the changes he will bring into our lives as part of his Body. The blues of Advent have become white. The darkness has become light. The music and message of preparation and anticipation have become those of revelation. Change will come, but it will be by the will and grace of the One whose love for us never changes.

*Thanks Pastor Tim, Lori, Christine and Erica, for your friendship and ministry among us.
God be with you as you continue in his Word.*

Baptism Pictures

Pastor's last Sunday with us is also the celebration of the Baptism of Christ. How appropriate it is to remember our baptisms, of who and whose we are, as we all begin moving in new directions of ministry. As a part of this celebration, we would like to project images of our members' baptisms, not only those who were baptized in the past year but also pictures you might have of your own baptism. Please get them to me as soon as possible. Send them via e-mail (garysironen@netzero.com) or put them on a disc or flash drive. If you have photographs, scan them or get copies to me and I can scan them and return them to you. Be sure to include names and dates. Thanks.

Choirs

Looking for a new way to share your gifts with the congregation? The Worship Choir, Praise Choir and Hand Bell Choir are always ready to accept additional singers, ringers and instrumentalists. Make your New Year's resolution one of participating more fully in the life of our congregation. Come share your gift.

Blood Drive

Christ Lutheran is planning to host another blood drive on Sunday, February 7th. We will be donating from 8:00 a.m. until 1:00 p.m. that day in their bus parked beside our building. I will be recruiting donors and placing them in time slots immediately. I usually have to make more than 100 phone calls during a drive. If you have given blood before please either call me or get with me at church as soon as possible. This would be if you are interested or if you are not interested. That will save me lots of calls and lots of time. If we fill the time slots early I might be able to had additional times so we can " Save even more lives". Thanks, Dave Park -- 457-9792

Handbell Choir News

Here's a big thank you to all those who rang in the services and program last month and made all the special music possible. I very much appreciate all the accommodating that all of you do to make it possible for us to play everywhere we needed to.

As I wrote last month, we are losing a few ringers to schedule changes and Florida after Christmas. WE NEED YOU! There are spots open in both choirs; we practice at 6:30 and 8:00 p.m. on Monday evenings at the church. If you are someone who would like to join us or return to our choir, please let Marilyn know at 531-4703 or burgardm@sbcglobal.net. This information is in the bulletin each Sunday, or you can come up to the organ after the 9:00 service. I hope to be hearing from you. The 8:00 p.m. group plays a little more advanced music than the 6:30 choir.

We have lots of fun making our music and would like you to be part of it all.

Family Ministry Event

"Let it snow, let it snow, let it snow".

Join in the fun on Sunday January 17th for an afternoon of fun. Sledding is the name of the game! We will meet at 12:30 p.m. for lunch and then meet again at the Byron Christian Middle School to enjoy our beautiful wintry weather. Directions will be given that day. Just in case our snow disappears, we will have organized games both inside and outside at the church. Suggested cost of lunch is \$3/person, up to four people. Be sure to sign the reservation sheet found on the kiosk in the church narthex. Questions call Pam Schumaker 554-3628 or Kathy Reister 538-6585.



Stewardship Committee

God's Work – Our Hands

We recently commemorated the culmination of our annual Stewardship campaign. During both services on Consecration Sunday (November 22) we dedicated the gifts and pledges of all to the glory of God, and to His work in this place. Although this marked the completion of the current campaign, Stewardship is much more than the act of monetary giving and is an on-going process.

Over the period of several weeks in October and November several "Cottage Meetings" were held at the homes of various members of our community. The meetings consisted of fellowship, refreshments, bible study and a video of several people in our parish whose lives have been touched by giving and giving to others. Many who attended also shared stories about what giving has meant to them, and how the person "giving" nearly always "gets" more from the process.

We all have something to give – sometimes the hardest part is discovering what it is. Certainly prayer helps. Also connecting with others by joining a group or participating in one of the various ministries or activities available helps unleash "inner giving". Giving is an important part of our spiritual journey. We are, after all, doing God's work with our hands.