



July 2020

# ARCOver

A Community Service Organization Dedicated to Amateur Radio Since 1970

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# Amateur Radio Can Be Spectacular!

E-mail: [W6SBA@arrl.net](mailto:W6SBA@arrl.net)



Website: <http://www.w6sba.org>

## President's Message

SBARC members,

The community is on a slow roll to open up. I see the infection numbers increasing and now question whether the shutdown was really worth it. Time will tell. This brings me to the question of any gatherings. Due to risk, those are still off limits for non-family members to group dine. I get the impression there is more risk now then back when things were more restricted. It all seems like a big surreal social experiment. So for now let's just keep on checking in with each other on 224.38MHz!

I heard earlier today that Joanne KM6BWB was out at Castaic for another balloon launch, #11. I was looking at the tracking telemetry and see it headed north. Last check in, at time of writing this, the balloon was at 29000 feet near Tehachapi. Wishing it success for a full earth tour.

The TMMC location is still off limits. I think this may be the case for the remainder of the year. At this time we plan to hold the meeting through Zoom. The club leadership will send out a Zoom invite. Click on the link, enter the password, and you should be good to go.

We are still looking for a July speaker. If a speaker is not available, it has been suggested that we hold a group discussion where members can share their personal field day tales. This year we were all "field-daying" from home. Maybe not as much group fun but probably a lot more in our convenience and comfort zones.

Don't forget to find something to present to the club that you are interested in or have done in that secret ham workshop. Don't keep it a secret to long!

Upcoming monthly club activities include: the club meeting on July 16th and will be on Zoom; and at the time of writing this time, the TRW/NGC swap meet on Saturday July 25th remains cancelled. After the swap meet a few of us headed over to Denney's and this has been suspended until after the COVID shutdown. Then we may be able to head back over to the Denny's at 3060 Sepulveda Blvd in Torrance.

Stay healthy, stay in touch, and see you at the next SBARC virtual meet up in July!

73's...  
Scott-N6LEM

# JULY Meeting

Thursday, July 16th at 7:30 p.m.  
on Zoom

Expect an email with the invite to the meeting. Click the link in the email and Zoom software launches and you join.

Topic: TBD



### President:

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### Council:

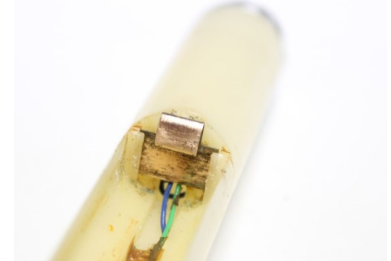
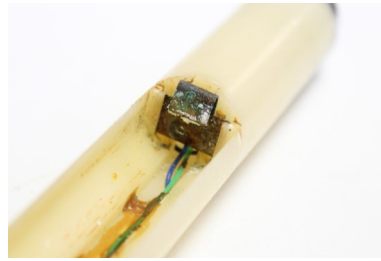
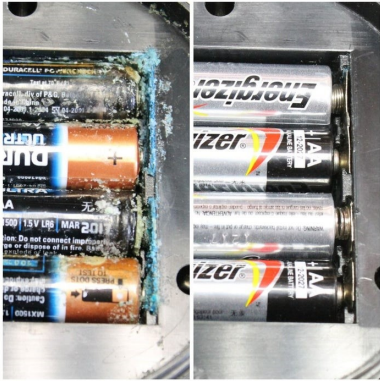
Greg-WQ9P, 310-702-9312  
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### Past Pres:

OPEN

# How to Fix Corroded Battery Terminals

By [lonesoulsurfer](#)



Many a time I've managed to get my hands on some electronic gizmo only to find that the battery compartment totally corroded. It's usually one of the main reasons I think that people throw toys and whatever else takes batteries away.

The corrosion is caused by potassium hydroxide which can leak out of alkaline batteries (these are the usual types of batteries you put inside toys etc). All batteries discharge, either through use or just slowly through the production of hydrogen gas which forms pressure in the battery. Eventually that pressure will find a way out through a seal or as the battery ages, through corrosion or rust in the outer shell.

As soon as the first signs of a leak forms, then the best thing to do is to get rid of the battery. if you don't get to it in time however, then the corrosion can grow and spread out of the battery which causes oxidation and corrosion of the terminals making your device caput.

This Instructable will go through a couple of ways that you can fix your device to bring it back to life again. The first is the most extreme corrosion where the terminals have to be replaced, the second is a small amount of oxidation which only needed the potassium hydroxide to be neutralised and the terminals to be cleaned.

You can take precautions though to stop this happening such as not mixing different battery types in the same device, replacing all of the batteries at the same time, storing in a dry place and at room temperature, and removing batteries for storage of devices. I'm inherently optimistic (and also lazy) so I've never taken any of these precautions but it's definitely good practice, especially with expensive electronic goods.

## Step 1: Parts and Tools

1. Battery Holders. I have a bunch of these lying around which are good for projects. You can also use the terminals from them to repair other electronic goods.
2. You can also just buy these terminals from [eBay](#)
3. Small files
4. Vinegar
5. Small paint brush
6. Needle nose pliers
6. Ear cleaners
7. Wire cutters
8. Soldering iron
9. Rubber gloves – to protect your skin from the potassium hydroxide. I have touched it before and it does mildly irritate the skin so it's best to use gloves when handling.
10. Eye protection – self explanatory
11. Protective mouth and nose mask. Potassium hydroxide can be quite dangerous and breathing it in can be toxic. Better to be safe than sorry.



*Continued page 4*



## Step 2: Removing Leaking Batteries

Don't use your fingers to try and remove the batteries. The potassium hydroxide inside the battery can irritate your skin (I know as I've touched it before!). Potassium hydroxide is a caustic agent and is the chemical that corrodes the terminals and destroys the batteries. You may have also seen a feathery crystalline structure forming around the battery and terminal as well. This is potassium carbonate and forms when the potassium hydroxide reacts with carbon dioxide in the air.

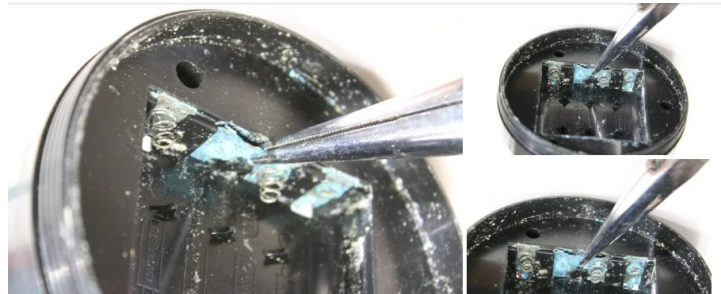
### Steps:

1. Place a set of rubber gloves on and some safety glasses
2. Use a small screwdriver to pull the batteries out. The glasses here are very important as it is easy to flick small pieces of the corrosion whilst pulling out the batteries.
3. Sometimes that batteries can be so corroded that they virtually weld themselves to the terminals. In this case you will need to use a large screwdriver and maybe some pliers to remove them. You'll probably rip out the terminals as well so be careful you don't pull any wires out at the same time
4. Dispose of the batteries in a plastic bag.

## Step 3: Removing the Corroded Terminals

Next thing to do is to remove all of the corroded terminals. It can be tricky sometimes to do this if they are severely corroded as bits can break off and the grooves in the battery holder can get clogged-up.

1. Use a small, thin screwdriver and push this between the top of the terminal and the battery holder. This should bend out the terminal
2. With a pair of needle nosed pliers, grab hold of the terminal and pull it out.
3. If the terminal has solder points, make sure you de-solder or cut the wires and cut them away to be able to remove them easily
4. Dispose of the corroded terminals once removed



## Step 4: Cleaning the Battery Cover

The battery holder that I fixed came away from the torch so make it easy to wash and clean. However, this might not always be the case as it will depend on what type of electronics you are cleaning.

### Steps:

1. You can neutralise any leftover potassium hydroxide (a caustic agent which acts a little like acid) with some vinegar. Many comments have been made on this in the comments section and initially I also included baking soda as a way to neutralise the alkaline. I've removed this as there is a fair bit of contention if this would actually work or not.
2. Next if possible, wash out the bottom of the battery holder and clean any of the old potassium hydroxide away from the case. If you can't remove the battery holder, then you are going to have to be a lot more careful when cleaning the area. Use a damp cloth instead of running water and remove any leftover potassium hydroxide residue
3. Next, you may need to remove any pieces of terminal or corrosion that is in-between the grooves that the terminals sit in. Use something thin and sharp to remove anything lodged inside the grooves.
4. Lastly, give the area a clean with some Isopropyl Cleaning Alcohol to remove any last traces of oils, stains etc.



For complete instructions and how to replace terminals when the corrosion is too bad see website:

[https://www.instructables.com/id/How-to-Fix-Corroded-Battery-Terminals/?utm\\_campaign=Gareth%27s%20Tips%2C%20Tools%2C%20and%20Shop%20Tales&utm\\_medium=email&utm\\_source=Revue%20newsletter](https://www.instructables.com/id/How-to-Fix-Corroded-Battery-Terminals/?utm_campaign=Gareth%27s%20Tips%2C%20Tools%2C%20and%20Shop%20Tales&utm_medium=email&utm_source=Revue%20newsletter)

# COOLTOOLS

07 July 2020

<https://kk.org/cooltools/>

## Micro-shear flush cutters

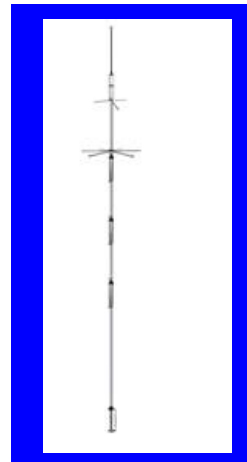


For precision cutting jobs of various materials

I was looking for an inexpensive pair of surgical nippers or tiny scissors for some time, since fingernail scissors have proven to be too fragile for cutting anything (including fingernails). While shopping at Princess Auto I came across this pair of [spring loaded stainless steel Palm Nippers](#) (aka Micro-shear flush cutters) which looked like they might fit the bill. These are a great little tool, they are small enough, sharp enough and go down to a fine point for all the precision cutting jobs I might need and they are tough enough to cut copper wire up to 1.2 mm so they are great at cutting cable ties, plastic packaging, thickened toenails and other tough items. I'll be going back to purchase a second pair for my tool box.

-- Bonnar Beach

(site and info sent in by Ed Hinz, KN6JN)



## Hustler 5BTV 5-Band HF Vertical Antenna

Good antenna to use with 10 to 80 meter bands.

Clean condition with all the mounting hardware  
For sale for \$80/obo (sells for over \$200 new)

See specifications for it on this website:  
<https://www.dxengineering.com/parts/hsr-5btv>

Contact Scott, N6LEM, if interested or have any questions.

— *Anyone else have any items they want to sell, email newsletter editor, Glenda, KF6QFE at [glen-da.simpson@hotmail.com](mailto:glen-da.simpson@hotmail.com) with a picture of the item with details.*

Hope you had a happy  
"Covid-safe" 4th of July!



## QSO Today Virtual Ham Expo Announces Full Lineup of Speakers

ARRL.com 07/06/2020

The first **QSO Today Virtual Ham Expo** Saturday & Sunday, August 8 – 9, has confirmed what it's calling "a packed lineup of over 70 great speakers" for the ARRL-sanctioned event. Attendance is free and **registration** is open.



Presentations will cover a range of topics, with two tracks focused on providing hands-on, practical advice for those just getting started in amateur radio. Steve Johnston, WD8DAS, will demonstrate basic soldering techniques for repairing equipment and building projects. Marcel Stieber, AI6MS, will offer an overview of common battery types, discussing the pros and cons of each — including battery chemistry, common uses and misuses, and everyday application tips.

For experienced operators, topics will cover new techniques, equipment upgrading, 3D printing, and more. Glenn Johnson, WØGJ, will attempt to answer the question, "Is 3 dB Worth a Divorce?" and cover a wide range of antenna topics. Jim Veatch, WA2EIJ, will explain how to build a QRP radio. In his presentation, "The Slot Antenna — Undiscovered Country for Most Hams," John Portune, W6NBC, will demonstrate how a satellite TV dish can be "slotted" to make an effective outdoor 2-meter or UHF antenna for use in antenna-restricted neighborhoods.

Prominent youth educator Carole Perry, WB2MGP, will moderate a lineup featuring amateur radio's future leaders. Audrey McElroy, KM4BUN, will speak on, "Getting Girls Involved in STEM, Specifically Amateur Radio!" while hot-air ballooning will be the focus of a talk by Jack McElroy, KM4ZIA, "Highly Flying Kids with HAB."

QSO Today's Eric Guth, 4Z1UG, says that one challenge to any ham radio convention, whether in person or virtual, is keeping the content of presentations from becoming overly complicated and overwhelming. "For our inaugural virtual Expo, we've made sure that there are great speakers for both beginners and experienced hams," Guth said. "We've asked all of our speakers to be laser focused on their topics while providing hands-on, practical advice." Each presentation will wrap up with a live question-and-answer session.

For more information or to register, visit the **QSO Today Virtual Ham Expo** website (<https://www.qsotodayhamexpo.com/>).

Attendance is free, and there are early bird prize incentives for registering by July 24.

## MARS Announces HF Skills Exercise

06/26/2020



Members of the Military Auxiliary Radio System (MARS) will conduct an HF skills exercise July 20 – 24 to hone their operating skills and messaging-handling capabilities.

MARS members will be reaching out to the amateur radio community via the 60-meters Channel 1 Net (5330.5 kHz dial) twice a day, the SATERN HF net (14.265 MHz), and by contacting various stations via HFLink throughout the exercise. MARS members will be requesting assistance with collecting county status information as well as airport weather information, called METARs. MARS members will also be passing ICS 213 messages to numerous Department of Defense (DoD), federal, and amateur radio addressees.

This exercise will be announced via WWV at 00:10 and via WWVH at 00:50 starting on or about July 13. WWV and WWVH listeners will be asked to take an online listener survey. This HF radio training event will not impact regular communications. —  
*Thanks to Paul English, Chief, Army MARS*

## Gareth's Tips, Tools, and Shop Tales

Ed, KN6JN recommended this gem of a website. You can find all kinds of helpful info on it. Things like:

- Making Your Own Dupont Connectors
- Sharpening Spade Bits
- Lazy Susans in the Shop and in Projects
- Using Clamps to Spread Things Apart
- Making a Wire Clamper



*Anyone run across a site you think we'd find useful, send it for inclusion in the newsletter.*



## Prominent Radio Amateur Helping to Lead US Convalescent Plasma Expanded Access Study

ARRL.com 06/30/2020

Well-known contester, DXer, and *National Contest Journal (NCJ)* Editor Scott Wright, K0MD, has been “substantially” stepping back from ham radio while offering his expertise to the US convalescent plasma **COVID-19 Expanded Access Program**. The study began in early April under the leadership of Dr. Michael Joyner, MD, of the Mayo Clinic; Dr. Peter Marks, MD, PhD and Dr. Nicole Verdun, MD, of the US Food and Drug Administration; Dr. Arturo Casavedall, MD, PhD, of Johns Hopkins University, and Wright, who is with the Mayo Clinic. Dr. Marks is AB3XC.



Dr. Scott Wright, K0MD.

“The US Convalescent Plasma Expanded Access Program is a collaborative project between the US government and the Mayo Clinic to provide access to convalescent plasma for patients in the US who are hospitalized with COVID 19,” Wright told ARRL. The work has been referenced during White House press briefings and in congressional testimony. The US government-supported study collects and provides blood plasma recovered from COVID-19 patients, which contains antibodies that may help fight the disease. The Mayo Clinic is the lead institution for the program.

“My role was to organize the infrastructure and the research approach, and to help lead the set-up of the data collection and of the website teams, while overseeing the study conduct and regulatory compliance,” Wright explained.

According to a June 18 *Washington Post* **article**, “A large study of 20,000 hospitalized COVID-19 patients who received transfusions of blood plasma from people who recovered found the treatment was safe and suggests giving it to people early in the disease may be beneficial.”

An initial **safety report** on 5,000 patients appeared in May in the *Journal of Clinical Investigation*. The **safety study** on 20,000 subjects referenced in the *Washington Post* article was published earlier this month in the *Mayo Clinic Proceedings*.

Wright said most scientific studies of this magnitude take months to a year with planning and execution to get under way. In this case, the study team went from zero to 60 in a few short weeks.

“We started in less than a week. Most studies recruit 2,500 – 5,000 patients,” Wright said. “We have recruited over 30,000 patients in 10 weeks, exceeding all expectations.”

Hospitals in all 50 states and several US territories are participating, Wright said, and more than 8,000 physician-scientists are working with the team as investigators at their hospitals. “We also helped manage the start-up of collection of convalescent plasma by the large blood organizations, such as the American Red Cross, by strategically connecting donor pools and people willing to donate with the blood collection centers.”

Wright’s study responsibilities, which are on top of his regular day job, have required him to work daily, including weekends, for all of April, most of May, and all of June. “It has been intense,” he said.

Wright said an FDA announcement on the benefit of convalescent plasma was expected soon. “We are working on a third publication now to submit to a major international medical journal for publication on whether the study has shown that use of convalescent plasma reduces mortality,” Wright added. The FDA has been **inviting donations** of convalescent plasma from individuals who have fully recovered from COVID-19.

Wright will be the keynote speaker at the **QSO Today Virtual Ham Expo** August 8 – 9 to discuss the study, its results, and, he said, “linking it to skills acquired through ham radio.

## CALENDAR

**Council Meeting** - 4th Wednesday of the month  
Call Joe - WB6MYD (310) 328-0817

**Club Meeting** - 3rd Thursday of the month  
**July 16, 2020 - 7:30 p.m.**

**Via Zoom  
(look for email)**

**Club Nets** - **W6SBA WEEKLY NET**  
Every Thursday @7:30pm  
(except the night of club meetings)  
**PVUSD EMERGENCY NET**  
1st Tuesday of the month  
09:30 Hours on the W6SBA repeater

**TRW Swap Meet** **Cancelled Until Further Notice**

**VE Sessions** - **Scheduled on Saturday of even months**  
Contact Betty, N6VZF, with questions  
(All VE sessions are scheduled for Room 4 in the Health  
Conference Center)

**Social Event** - **Contact: Joe WB6MYD**  
**Phone: (310) 328-0817**  
**jmlanphen@gmail.com**

## CLUB SERVICES

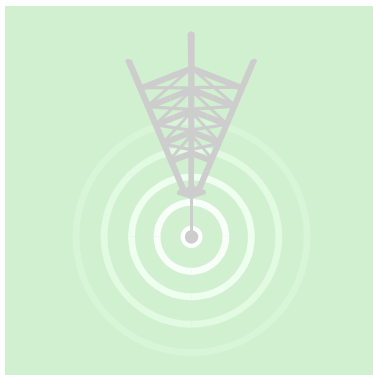
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
Swap Meet Chair	Tom-KI6RC, Chuck- K6CSH., Bill-KQ6Z
VE Test Liaison & Sessions	Betty Barch-N6VZF N6VZF@arrl.net (310) 545-6422
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Proofreader	Scott - N6LEM

**South Bay Amateur Radio Club Repeater**  
**224.38 MHz · PL - 192.8 Hz Offset -1.6 MHz**  
**(See Calendar for Weekly Net Times)**

## NEWSLETTER SUBMISSION

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TO:



Address Correction Requested

*A COMMUNITY SERVICE ORGANIZATION*

W6SBA

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