



Welcome to SFARC, Auburn, CA



P.O. Box 6421 Auburn, CA 95604

September 2022

<http://w6ek.org> info@w6ek.org

At The Key of SFARC:

PRESIDENT

Jeff Morgan, KM6RGO
jamontrail@gmail.com

VICE PRESIDENT

Greydon Hicks, KC6SLE
lisagreydon@gmail.com

SECRETARY

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TREASURER

Rob Newburn, KM6YKX
RobNewburn@att.net

DIRECTORS

Gerry Brentnall, WA6E
Mike (Smitty) Smith, WB1G
Amir Larian, N6ADL

FIELD DAY CHAIRMAN

Herb Garcia - KM6JBI

REPORTERS

Satellites: Greg, KO6TH
Sunshine: Pam, KN6GTK

GROUPS io

Dennis Gregory, WU6X

PIO/Social Media Officer

Mike (Smitty) Smith, WB1G

REPEATERS

145.430 (-0.6 MHz/PL 162.2)
Wires-X, Allstar, Echolink
440.575 (+5.0 MHz/FUSION)
223.860 (-1.6 MHz/PL 110.9) Allstar

CLUB NET

Thursdays, 7:30PM, W6EK/R 145.430

CLUB MEETINGS

Second Friday of the month,
Crossroads Church @ 7:30pm
1101 Auburn Ravine Rd, Auburn

CLUB BREAKFAST

Last Sat of the month at Mel's Diner
1730 Grass Valley Hwy, Auburn 7:30AM

NET CONTROL OPS

Dave Jenkins, WB6RBE
Orion Endres, AI6JB
Chip Bautista, KM6MDF
Mike (Smitty) Smith - WB1G

NEWSLETTER EDITOR

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kd7g@arri.net

WEBMASTER

Herb Garcia, KM6JBI

STATION TRUSTEE

Clyde Campbell, AB4CC

VOLUNTEER EXAMINER

Brian Gohl AI6US
ai6us@arri.net



Calendar of Events

General Club Meeting

September 9th @ 7:30pm

Club Picnic

September 17th @ 4pm

Club Breakfast

September 24th @ 7:30am
@ Mel's Diner

Fox Hunt

September 24th @ 9:30am

Clearnode Net

Mondays @ 7pm, W6EK 2m
repeater

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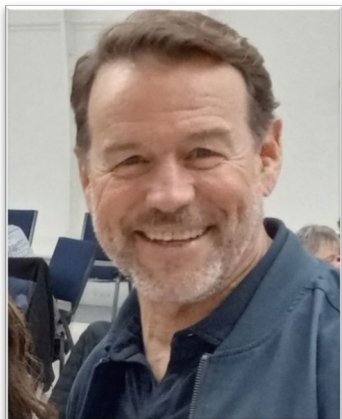
Join us every morning @ 7:30am
for the Coffee Break Net on the
W6EK repeater 145.43, PL 162.2

Inside this issue

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We encourage members to receive Sierra Signals via email to save the Club the cost of reproduction and mailing

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President's Message

By Jeff Morgan – KM6RGO
President

Fall is approaching!

Fall is one of my favorite times of the year for outdoors fun. We are blessed to live in an area that has such great weather and a broad choice of places to go and things to do. You don't even need to go far to enjoy views worth the effort. A hike in the local canyons or a walk near the river gives me peace of mind. Even just parking near the Forest Hill bridge to soak on the views. The weather is still warm, but cooling each day. Take the time to go for a walk or enjoy the local festivals before the rains come. At least I hope the rains come! In either case, it's good for the soul to get outdoors, even if it just for a little while.

SFARC Picnic

It's time to get together for a good old fashioned picnic! Mark your calendars for **Sep 17** for our club picnic at **Recreation Park at 4:00 pm**. Hotdogs and potluck style extras are on the menu. Maybe a game or two to add a little healthy competition. Mostly, it'll be good to see everyone in person having a good time. Bring your chairs and, if you have one, a project you have been working on to share with the group. I look forward to seeing you!

Elections

Elections are coming up. We have such a vibrant club, with a variety activities for everyone. If you have thoughts on the direction the club is going or want to be a part of the inner workings, then come join the team that makes this club the best in the area! We love to hear your ideas and it does take a village, to put it all together. Many hands make light work!

IT SUMMIT

We are making progress! The **IT Summit** team has been reviewing a well known membership management software in the ham community. So far, it looks to be good solution to our needs and could dramatically reduce the workload our **Treasurer, Rob - KM6YKX** does to keep us organized. One of the things discussed is having a **Membership Chair** that could be first contact for new members or assist with current members inquiries. If you would like to be a part of the team that makes our club great, let us know! We are also making progress on updating the website. There are state required compliance issues which prompted a review. The more important part of that is we make our website as accessible as possible so all hams and members can enjoy our website when they visit. A big thank you again to the **IT Summit** team. We continue meeting until the end of October. Hopefully, you will see some improvements soon!

Activities

The **Sat breakfast** on Aug 27 gave us a big surprise. Mel's had a conflict in reservations and asked us to reschedule at the last minute. Well, **Dennis - WU6X** came up with a great solution, We met at **Wings** at the Auburn Airport! It turned out to be a beautiful day with a big group all enjoying the airport activity. Perhaps, we might consider making Wings a part of the future rotation? It also appeared to be a great place to meet for another great **Radio Direction Finding Foxhunt!**

Which brings up something else. The **Radio Direction Finding group** has been meeting on Zoom on the 2nd and 4th Wed of the month and are thinking up other ways to teach skills to hams. The meetings are full of ideas and quite fun to attend. You never know what the group will come up with next!

August had another successful **Hams in the Hills** adventure! This time, a little more challenging and development of skills. **Paul - W2OHV** designed a route that made its way around the Wentworth Springs area and even close to the Rubicon and finally up McKinstry Peak for fantastic views of the area. **Greydon - KC6SLE** was on a separate trip on the Rubicon and Hams in the Hills were able to chat with him on simplex for a while. Some of you may have even heard **Smitty - WB1G** call home through our repeater using **Auto Patch**. A great demonstration of the capabilities of our repeater!

Have fun the rest of summer and be safe out there!

73!

Jeff - KM6RGO

Board of Directors Meeting Minutes

August 12, 2022

The meeting was called to order by President Jeff KM6RGO at 6:05pm In attendance in addition to Jeff were Vice-President Greydon KC6SLE, Treasurer Rob KM6YKX and Secretary KG6UCS Orson Directors Gerry and Amir. Also Denis WU6X

The June minutes were accepted as submitted.

Asking for volunteers for Drawing Chairman and Picnic Chairman.

September 17th 4pm Club picnic

August 20th NAQP sideband contest

RDF group and club breakfast 8/27/22

Rob gave an accounting of the clubs funds.

Greydon asked about starting a new group for build projects and requested funding. Need more info on the group to supply funding.

No new news on the website work. Accessibility reader for ADA compliance still under investigation

New VE testing tablets purchased and ready for use. Insurance clarification is if its a club sponsored event the club is covered.

Looking into Hamclub online for membership management and database. Membership is up to 233 members.

Square reader for payment platform added. Motioned by Gerry seconded by Orson

Board meeting being moved to Thursday before on zoom for convenience.

The meeting was adjourned at 7:05PM.

General Meeting Minutes Video Conference Zoom Meeting

August 12, 2022

President Jeff KM6RGO welcomed individuals to the meeting.

The meeting was called to order at 7:35 PM by President Jeff KM6RGO who opened the meeting by leading The Pledge of Allegiance.

All Board Members were present. Accept Smitty WB1G

Last months meeting minutes were accepted as submitted.

August 20th NAQP sideband contest, August 21st Rookie Roundup, August 27th club breakfast and RDF activity after. Club picnic September 17th

Tech-Ten

Denis WU6X gave us a final riveting Field Day recap. Record year for the club 5960 pts

Tech Twenty

K6YMM told us all about Fox Hunting

General Announcements by President Jeff KM6RG

the club is looking for a new in person testing venue, Picnic Chairman and Drawings Chairman.

Brian AI6US showed us the new VE testing tablets, exams will start soon.

Square Reader accepted as payment option. Board meetings will be on Thursday prior to Friday's meeting on Zoom.

Contact Orion AI6JB for info on upcoming license classes

The meeting was adjourned at 9:10 PM. Submitted by Orson KG6UCS

All The Social Links in ONE SPOT!

- <https://www.facebook.com/groups/sfarcw6ek/>
- <https://www.instagram.com/sfarcw6ek/>
- <https://www.twitter.com/sfarcw6ek/>
- <https://www.linkedin.com/company/sfarcw6ek/>
- <https://www.youtube.com/user/w6ek>
- And, Groups.IO - <https://w6ek.groups.io/g/sfarc>

Upcoming Club Presentation

Wow! What a great turnout both in-person and via Zoom for our August club meeting. Thanks to all those who made the effort. It's very rewarding to our presenters to see so many faces in the audience. And speaking of presenters, a big "tip of the hat" and thank you to both Dennis W6UE and Mike K6YMM who were our presenters and did a wonderful job.

If you were not able to see our August presentations, or other past months presentations, they are available on the club's YouTube page. Check them out.

Speaking of club presentations, thank you to everyone who has offered up suggestions for future club presentations. I am pleased to announce that we are fully booked for the balance of this year... and I am also very excited with the topics. Clear your calendars for the upcoming club dates and come on down and join the fun. To borrow a lyric from a famous rock song; "it will be worth it" (can you name that song).

Our next club meeting will be on Friday, September 9, at the Crossroads church in Auburn. For our next meeting we have Jim KN6OON doing our main presentation on an overview of the use of imbedded microcomputers within HAM products and potential HAM projects. Many of you should recognize Jim as an employee in the Sacramento HRO store. And Greg KO6TH is putting together another "show us your shack" with a mystery shack guest, Love these "show us the shack" presentations. Great way to see others creativity and add to your own.

And a reminder, just because we are fully prescribed for club presentations for the balance of this year, keep the suggestions and ideas coming. It will give us a great head start for next year. Continue to send you thoughts and ideas to lisagreydon@gmail.com, or give me a call at 925-768-0830.

73s, be safe, and enjoy!

Greydon, KC6SLE

SFARC Vice President

Club Radiosport

Click [here](#) to download ARRL & Non-ARRL contests for the month of SEPTEMBER.

Events

FOX HUNT



The next SFARC FOX HUNT will be held on SEPTEMBER 24TH from 9:30 to 12:00. The town in which the transmitter is hidden will not be provided, but clues will be given to get you started. At this time, we are hoping to make it somewhat challenging. One clue is: the fox is clever and not obvious to a casual observer.

As in previous hunts, equipment is available to loan or if you contact us ahead of time, we could try and have you go with another person who has done this previously. No matter what, we can guarantee a FUN time.

The Fox, Fox Team operating frequencies and other information will be provided prior to Sept. 24th. Coordinator of the this event will be Gary K7EST (phone number is in the club roster) or email address is folsom237@yahoo.com

CLASS – ya, this club has *lots of class*, and this time, it's GENERAL

GENERAL LICENSE CLASS STARTS NEXT WEEK

Septemer 6th @ 7PM | Online (Zoom)

Interested in upgrading to a General? The SFARC General License class starts next week (September 6th). It's open to ALL amateur radio operators, not just club members. The cost is \$40 for SFARC members, \$65 for non-members and when you're ready, you can take the test with the club on one of our new VE tablets. Interested? Send email to Orion @ upgrade@w6ek.org.

How About A Trivia TWO-FER?

In what year was the first no-code Technician license granted?

A: 1981 – B: 1986 – C: 1991 – D: 1996

What measurement is NOT a name of famous person in electronics history?

A: Ampere -- B: Ohm -- C: Hertz -- D: Micro

Answers can be found in "From the Newsletter Editor's Desk"

A Simple Project To Test Interest

MEMBER CONTRIBUTION from Doug – W2VX, Greydon – KC6SLE and Jon – KI6RT

Earlier this month there was a discussion on the Coffee Break Net about electronic circuits -- radios are getting complex often beyond the capability of the average ham. Ironical given amateur radio has historically been the domain of radio hobbyist who back in the early 1900s were relegated to wavelengths of 200 meters or shorter (these “short wave” frequencies were generally considered useless at the time).

Several of us proposed SFARC projects that interested members could build and while learning electronics. Ideally projects would be “useful” (i.e. use it in the shack), low cost, and uses “old eyeball friendly” commonly available parts. I (Jon - KI6RT) proposed starting with Power Supplies. Doug (W2VX) suggested an HF transceiver using a Tayloe I/Q mixer connected to the average computer sound card. Others suggested antenna tuners, HF transmitters, HF receivers, VSWR meters, field strength meters, etc. Greydon (KC6SLE) presented to the board. While not SFARC board approved as a club sponsored activity, Doug and Jon took the Nike logo approach – Just Do It!

To that end Doug has been working on a Low Voltage Drop Out Protection circuit. I focused on a Single Output 12V Power Supply. The power supply design is highly modular (Hams can never agree on a design) and uses parts that should rarely be impacted by supply chain shortages (like the old days when HF transmitters were built using salvaged black/white TV horizontal sweep tubes).

12V Power Supply – learn the basics

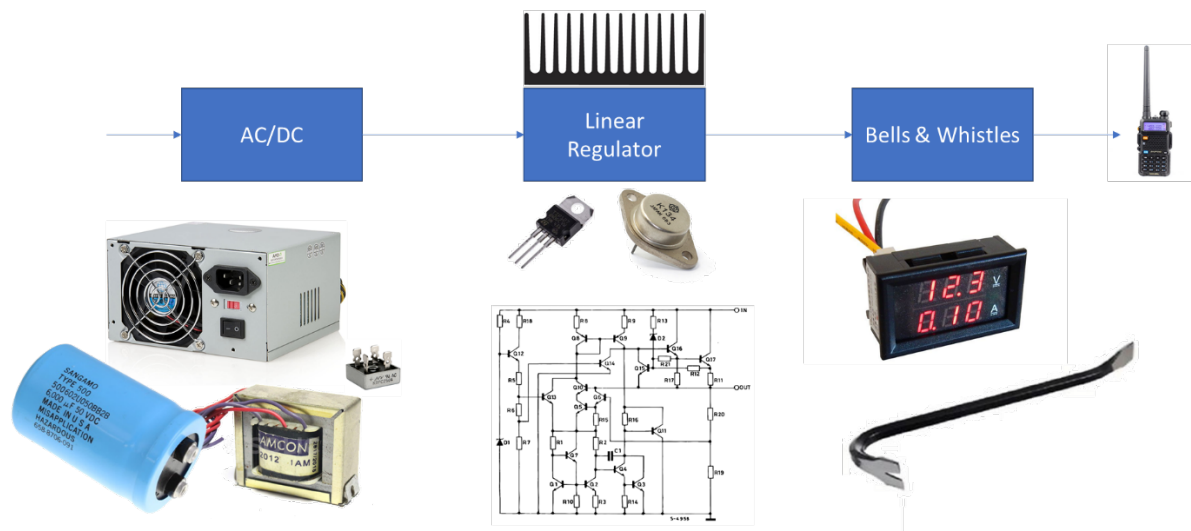


Figure 1.

Modular Power Supply From Which Many Variations Are Possible

An initial circuit has been prototyped and the first PCB (printed circuit board) has been fabricated. Several variations have been built (high current, lowest cost) with test results showing excellent performance (line regulation, load regulation, current limit, over voltage, ripple/noise, etc).

Typical Performance

CATEGORY	TYPICAL/COMMENTS
OUTPUT VOLTAGE	13.8V typical (adjustable from 10V – 15V)
OUTPUT CURRENT	Determined by builder (suggest max <50 amp)
LOAD REGULATION	0.05% typical (0 to full load)
LINE REGULATION	0.01% typical (105-125 VAC)
RIPPLE	5 mV typical
NOISE (bandwidth limited to 50 MHz)	25 mV typical
CURRENT LIMIT	130% of full load (builder selected)
CURRENT FOLDBACK	Not in present design
OVERVOLTAGE	Yes (set point defined by builder)
OVER TEMPERATURE	User Option (you pick the temp)
EFFICIENCY	Depends on RAW DC Input Voltage
REGULATOR BOM COST	<\$10 for 5 amp version
AC/DC COST	Depends on builder choices

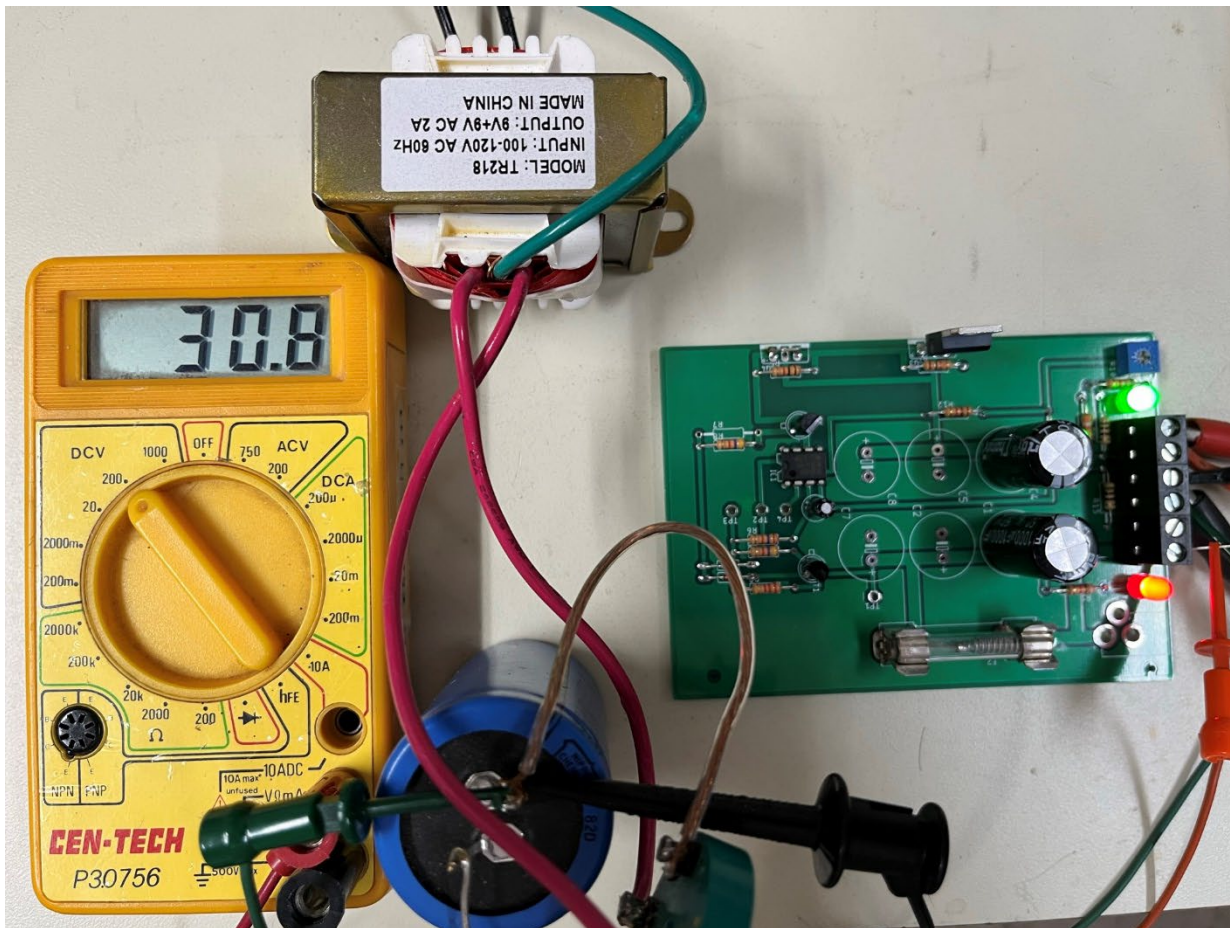


Figure 2. Version of the 12V power supply using a COTS transformer supplying 30VDC raw input

A high current build (30 Amp) will be evaluated in the next 30 days before a refined version of the PCB is sent out for fabrication. A dual output power supply version has also been developed for those interested in experimenting with Op Amp or other analog circuits.

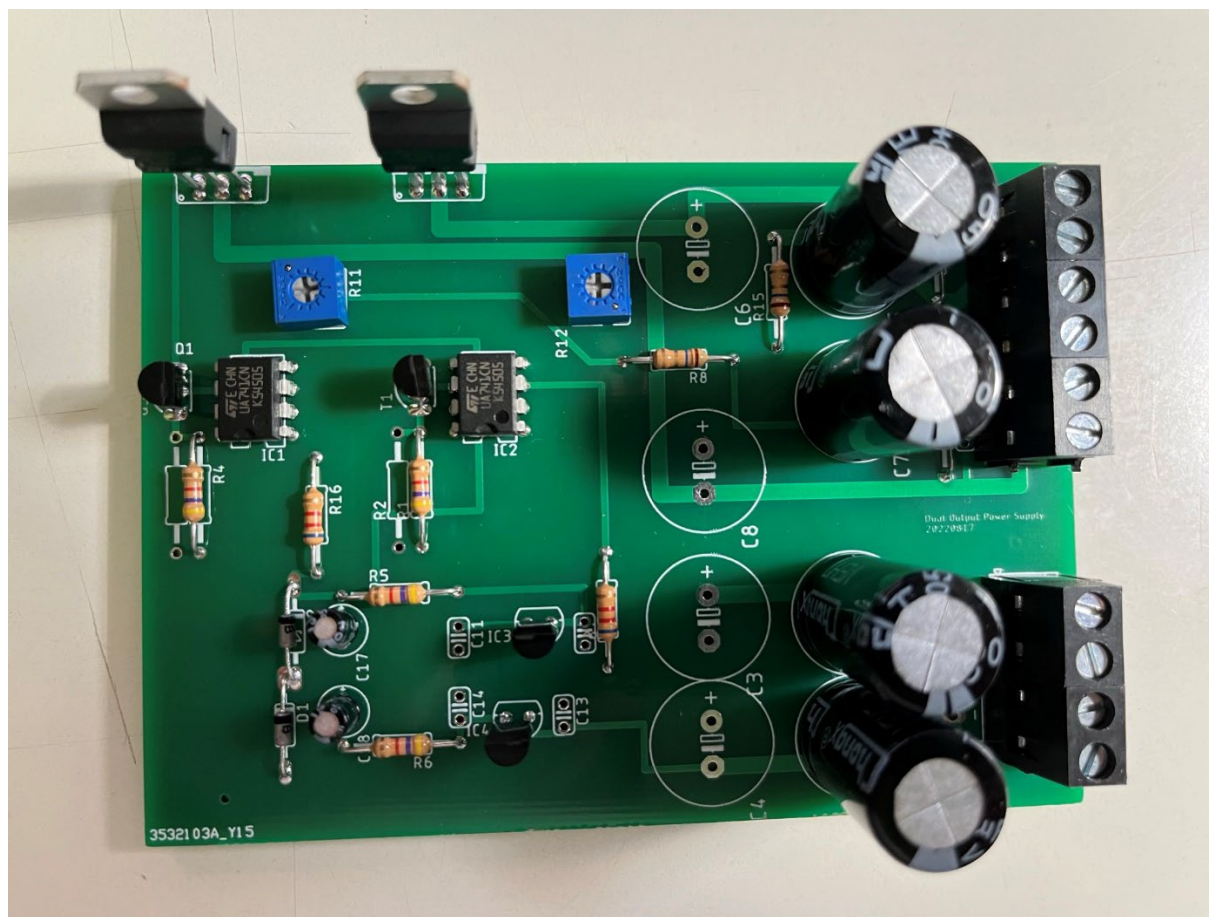


Figure 3. Dual Output (+/- 20VDC 0.2A) Power Supply

How To Get Involved

If you are interested please send email to kits@kimresidence.com (emails will forward to Doug, Greydon and Jon). We welcome project ideas/suggestions, feedback on current designs, volunteers to take on a project, etc.

How Much Will It Cost

Project builds are member funded (i.e. each individual pays for their build). For the power supply the core project (PCB, parts) will be common "core". User selectable items (AC/DC section, extra pass elements for higher currents, chassis, bells & whistles) will be left to the implementor and your budget.

Estimated cost for the single output power supply "core" will be less than \$20.

How Do I Build The Circuit

An initial "build party" will be organized where the project will be discussed (theory of operation, selecting optional items), step by step assembly (may take more than one meeting), and assistance with final test (performance test using test equipment that will be brought to the build).

Goal is to have a completed power supply built to your requirements ready to be placed into operation!

What Tools Do I Need

You will need basic tools including:

- Needle nose pliers
- Diagonal cutters
- Small Flat & Philips screwdrivers
- Soldering iron (<60 watts), solder, etc

Can you bring more? Of course and many probably will!

When Will The Build Happen

The first build will be scheduled early October at a time/place that will be announced. You will need to signed up to participate (emailed kits@kimresidence.com with Name & Call Sign). We will only kit for persons signed up.

NOTE: Future projects that are more complex (e.g. HF transceiver) will take several build sessions.

Can I Decide To Build The Project Later

After the initial “batch” of kits, subsequent builds will require someone to volunteer organize purchase of parts (defined in the BOM or Bill Of Materials), kitting the parts, collecting payment, organizing a build session, etc. Doug, Greydon & I will be available to assist but will probably be onto other projects (we have ADHD 😊).

Who Do I Contact For More Information

If you have addition questions please send email to kits@kimresidence.com that will route the message to Doug, Greydon & Jon.



From the Newsletter Editor's Desk:

Welcome to September you beautiful radiating Amateur Radio Operators!

First and foremost, I just have to say how wonderful it is to have people put together an article, or write a blurb about the next fox hunt. Seriously, I love to write, and that is what makes this newsletter a joy to write and put together. So...

THANK YOU!

You might wonder how's the progress on my antenna tower. Actually, I wonder myself! I've been able to continue the digging and am close to 3 feet down. I'm taking micro steps toward completing the dig. And, did you know that micro is not a measurement name after the last name of a famous person in electronics history? Well, it's true!

Whoops, I digress – that big hole in my side yard, I have to go slow and careful – I have degenerative disc disease and most of my lumbar discs are in pieces, and one is completely gone. I also have 4 cervical discs (the ones in your neck) that are in fairly bad shape, so, I just chip away at the hole, slowly and carefully. But just wait and when I get that thing up and the 10 element Yagi-Uda antenna pointed up towards Auburn it will be like I am right there under the W6EK antenna!

Did you know that I was in the Navy and participated in the Gulf war? You know, that one that started with SHOCK and AWE? Ya, that one. Well it ended in 1991, the same year that the first no-code Technician license was granted.

Stay cool this month, actually, this weekend – predicted temperatures here in Antioch are 110 on Monday! – have another great amateur radio month of September and please be safe.

If you have any information for the newsletters, ideas, recommendations, events you've heard about, etc., please don't hesitate to send it to me. Even if you 'think' someone else has probably sent it to me, send it anyway – assume they haven't. 😊 Email: kd7g@arrl.net or james@jamesmarchetti.com – either way, I will get your email.

Thank you & ***be radio active!!***

73,

Jim – KD7G



SIERRA FOOTHILLS AMATEUR RADIO CLUB

P.O. Box 6421, Auburn, CA 95604

2022 MEMBERSHIP APPLICATION

Name: _____ Call: _____ Class: _____ e-mail: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Associate Name: _____ Call: _____ Class: _____ email: _____
 Phone: _____ Cellphone: _____ Application is: (New / Renewal) _____

Dues / Donations:

Membership: yearly* \$22.00 or 20x _____ Name Badge: \$ 10.00/15.00 Yes (special name) _____
 Associate: yearly* \$ 7.00 Repeater Donation: \$ _____
 Auto Patch Donation: \$ _____ Newsletter Booster: \$ _____
 Misc. Donation: \$ _____ Christmas Donation: \$ _____ ARRL member? (Yes/No/Life) _____
TOTAL: \$ _____ Please add \$1 if paying via PayPal

*Prorated dues for NEW Members/Associates Only

July	\$ 20 /6	October	\$ 14/3 + following year
August	\$ 18/5	November	\$ 12/2+ following year
September	\$ 16/4	December	\$ 10/1 + following year

New - - New - New -
Multi-year DISCOUNT Membership
 *\$20 per year for 2 or more years (new or renewal)

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Date: _____ Treasurer: _____ Secretary: _____ Roster: _____
 Payment: _____ Check Number: _____ Cash: _____ PayPal: _____

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