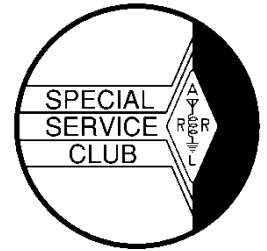




# The *ORC* Newsletter

Official publication of the Ozaukee Radio Club, Inc. Email all contributions to the editor, Ben Evans, K9UZ. Permission to reprint articles published in any issue is granted provided the author and the Ozaukee Radio Club Newsletter are credited.



ORC Repeaters on 146.97 (-127.3PL), 224.18 (-127.3PL), 443.75 MHz (+127.3PL) - Callsign W9CQO

Web site: [www.ozaukeeradioclub.org](http://www.ozaukeeradioclub.org)

Facebook: [facebook.com/orcwi](https://facebook.com/orcwi)

Volume XXXII

March, 2020

Number 3

## From the President

de Pat Volkmann, W9JI



Several months ago, I got a couple of old radios from a club member. The radios, a Collins 75A-4 and Collins KWS-1, are known as the "Gold Dust Twins". The KWS-1 is a pretty powerful transmitter running at about 1 kW input power. This high power radio needs 240 volt power to work properly. I didn't have a 240 volt line in the shack so one had to be installed. As you can imagine, this caused some disruption as tables and radios had to be moved out of the way to run the new circuit. All is finally done and the Gold Dust Twins are on the air again. I'm hoping to use them in the upcoming Wisconsin QSO Party on March 15th.

We will be talking about Awards again this month. You will have another opportunity to recognize the contributions of your fellow club members through nominating them for an award. The Club Bylaws on the website list 15 different awards. Take a look at the list and think of who deserves some recognition.

The Repeater Committee will be looking for your input to help set the future direction of the ORC repeater. Mike Harrington KD9GCN is chairing the committee. Please contact Mike if you are interested in helping out or have some suggestions on the repeater.

In February, Tom KC9ONY and I attended a meeting of south eastern Wisconsin ham clubs. This group meets occasionally to discuss issues facing local clubs and to come up with ideas for promoting ham radio. One activity that came out of this meeting was to collect some basic information from each club, such as when and where meetings are held and what is the purpose of the club. This information would then be published on a website so that people looking to join a club could more easily find a group that matched their interests. I think that this is a worthwhile project that could help spur membership. If you would be interested in participating, contact me or Tom.

We are still looking for someone to take over the job of Club Historian. Please contact me if you are interested.

See you at the meeting.

Pat Volkmann W9JI email: [w9ji@arrl.net](mailto:w9ji@arrl.net)

# DX'ing & Contesting

*De Gary Sutcliffe (W9XT)*



The first thing on the list for March is the Wisconsin QSO Party. Hopefully, you will receive the newsletter in time for this to remind you. It starts at 1:00 PM (local) Sunday, March 15. Check out last month's newsletter for tips on operating. The rules are somewhat complex, so read them before the contest. The rules are at <http://www.warac.org/wqp/wqp.htm>

Remember, you can make contacts regardless of your station, even 2 meter FM simplex contacts count. Every QSO helps! Be sure to get your logs submitted by March 29 and be sure the Ozaukee Radio Club (spell it out, don't abbreviate) is listed as the club. Let's get a big effort out and win the club competition

for the ORC!

Other than the ARRL DX Phone Contest, which was covered last month and will be over by the time you read this, the other big contest is the CQ WPX Phone contest. It starts at 0000 UTC March 28 (7:00 PM Friday, March 27 local) and runs for 48 hours, but you can only operate 36 hours. The exchange is the signal report and a serial number.

QSO points vary depending on where the other station is located and what band the contact is made on. As a hint, a European contact on 40 meters is worth a lot more than a 20 meter contact to Kansas. Check the rules or just let your logging program figure it out for you.

The multipliers are the call sign prefix. W9, WA9, WB9, K9, KA9, N9, etc., are all multipliers. If you have a call like WT9Q, you will probably be a lot more popular than W9XT or K9DJT. Don't spend a lot of time trying to work a rare prefix. A KD6 will probably be a lot easier to work than a 9Q1 and worth just as much for multiplier value.

Rules are at <https://cqwpw.com/rules.htm>

The end of March pretty much finishes the spring contest season. There are, of course, a lot of smaller contests and state QSO parties, with something nearly every weekend.

There are some interesting DXpeditions in March and early April. Zambia should be on the air by the time you read this. 9J2LA will be on until March 15 by a large international group. They will try 160-6M, CW, SSB, and FT8.

A real brief one will be the St. Peter & Paul Islands off the coast of Brazil. They will be on as PQ0S March 14-16. This one is pretty rare because operations are infrequent and are usually short. No bands are mentioned, but we should have pretty good conditions on the southeastern propagation path on most bands. This is an IOTA (Islands on the Air) operation, so I would check 20 SSB first.

Reunion Island in the Indian Ocean will be on until March 22. TO7DL will be on 160-10M CW, SSB, and digital. The German group came on the air March 4 and had a big 80M CW signal around 6:00 PM local.

A group of Russian hams will activate Kyrgyzstan until March 17. The call is EX0QR. Again 160-10M, CW, SSB, and digital. This one is pretty rare. There is not a lot of activity, and it is a somewhat difficult path. Work them if you hear them.

In case you missed TU5PCT in February, you have another shot at the Ivory Coast. TU2R will be on from March 23-April 3. The Belgian group will be on 160-10M CW, SSB, and digital.

There are, as always, small single-person operations to various parts of the world. They have varying amounts of activity, depending on the time available and the motivation of the operator. Often they are part of a business trip or vacation, and operating occurs outside of other scheduled events. Operating bands and times are often during periods where we don't have propagation, and one reason I don't usually list them. Just keep an eye out for them.

**Finally, don't forget the Wisconsin QSO Party on March 15! We can win this!**

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## Operating Event Scheduling Tip

Pat Volkmann W9JI



I participate in a number of operating events and sprints that recur every month. Event organizers usually state the time and date in Coordinated Universal Time (UTC) so that everyone will know when the event starts, regardless of your time zone. This, of course, requires that you convert UTC to your local time and date. I'll tell you about a way to do the conversion using a calendar app that you may not be aware of.

Why UTC and not CUT? This is one of those things that the international standards groups worked out some time ago. The abbreviation is a compromise between English and French. Coordinated Universal Time in English would be abbreviated CUT. The French equivalent, Temps Universel Coordonné, would normally be abbreviated TUC. The International Telecommunication Union and the International Astronomical Union designated one single abbreviation for use in all languages. The name Coordinated Universal Time and abbreviation UTC were adopted in 1967.

I use Google Calendar to keep track of my ham events. Google Calendar has the ability to schedule events in any time zone, which allows the selection of either Coordinated Universal Time or Greenwich Mean Time. Both represent the same time, UTC  $\pm$  00:00. The difference is that Greenwich Mean Time is a time zone (like Central Daylight Time or CDT) and Coordinated Universal Time is a time standard. UTC is not adjusted for Daylight Savings Time.

When creating a calendar entry for a contest, I select Coordinated Universal Time (or Greenwich Mean Time) as the time zone, enter the date and time and then have the event show up in my calendar at the correct local date and time. I checked Microsoft Outlook, Apple Calendar and several others - all of these calendar apps have the ability to create entries in any time zone and display the event date and time in local time.

Here's an example. The Straight Key Century Club has a monthly sprint which occurs on the 4th Wednesday of the month from 00:00 UTC to 02:00 UTC. I create a new event and select Coordinated Universal Time as the time zone and set the event to repeat monthly. I enter the time and date and save the event. The contest is now shown on my calendar starting at 7 P.M. on Tuesday March 24th and ending two hours later at 9 P.M. No need for any time zone conversion or Daylight Savings Time adjustment.

Onetime events work the same way. Once an event is scheduled in UTC or GMT, it is displayed at the correct local time with no need to adjust for Daylight Saving Time.

Use of this calendar scheduling feature makes it easier for me to get the times correct, especially for recurring events.

# THE COMPUTER CORNER

## No. 264: Windows 10 Licenses

Stan Kaplan, WB9RQR 715 N. Dries Street Saukville, WI 53080-1664  
(262) 268-1949 [wb9rqr@att.net](mailto:wb9rqr@att.net)



Licenses for Windows can be confusing and hard to understand. This may help clarify it for you; I know it helped clarify it for me as I was researching this article. My sources are Win10 Forums and even some source documents that I had lying around with unknown origins. Poor documentation, Stan, when you don't write down your sources! Anyway, there are 3 types:

**1. VOLUME:** Whoever placed Windows 10 on the computer purchased a Volume Licensing Agreement from Microsoft. The license key (which was used to initially activate the copy) is not for resale, and may not be transferred with the computer if it is sold or otherwise changes ownership. This type of licensing typically is used with business, educational and governmental institutions. If you are the boss and got a Volume License Key (VLK) with the software, it typically allows that single product key to be used for multiple installations (bulk installation).

Just as an interesting side bit, I routinely used an XP disk some years ago that would install and activate on any Dell computer, because of a volume licensing agreement between Dell and Microsoft. However, it would not activate with any other brand of computer, just those manufactured by Dell.

**2. OEM:** This product key is issued by the Original Equipment Manufacturer. These keys are not for resale and can't be transferred to another computer. However, the key may be transferred with the computer if the computer is sold. Often this key is embedded in the UEFI firmware chip by the manufacturer, so it comes right with your computer when you buy it.

An (important) side issue: What the heck is UEFI? Well, do you remember the BIOS (Basic Input/Output System)? As of 2020, newly built computers no longer have a BIOS chip. The BIOS chip has been replaced and (expanded) by the new Unified Extended Firmware Interface chip. Just a couple of examples of the benefits of these new chips: they allow faster booting than the old BIOS, and they use new schemes that permit the use of larger hard drives. This is a topic for expansion in a future article.

**3. RETAIL:** Probably the most desirable of the three types, this is what you get when you buy a boxed copy of Win10 from a retail or online store. In the current world, you can even buy a copy of the license key and download it, then download a copy of the software. No box needed. The product key may be transferred to another computer. So, for example, you buy a boxed copy of Win10 from your local bookstore and install it on your older Dell laptop. If the laptop later dies and you purchase a Win 7 desktop from a friend to replace the laptop, you can use your Win10 DVD to install Win10 on the desktop computer. Most important, you can use the product key to activate that copy of Win10.

Why did I research this topic? I was tasked with setting up a Windows 10 Professional laptop for the ORC, to use during meetings to interface with our display projector. Therefore, I had to get a copy of Windows 10 Professional 64-bit, which I did at a cost of \$36 (after a 10% off coupon), after deciding which of the three types we should pay for. I selected RETAIL, so that if the laptop dies, we can replace it and use the DVD I created to install and register Win10 on a new machine without paying another fee.

Want to see what kind of license your copy of Windows is? At a Command Prompt, type "slmgr -dll" (without the quotes). Give it a few seconds to respond.

Happy Computing!



# UPCOMING EVENTS

**Breakfast at Jim's Grille in Cedarburg – Saturdays at 7:00 AM**

## **ORC Monthly Programs**

*March – Vic WT9Q, Selecting & Installing a Vertical Antenna*

*April - Gary W9XT, Soldering*

### **Home Brew Night**

Last year at the August meeting we had our first Home Brew night. Members brought in examples or pictures of project that had worked on. It was a lot of fun seeing what everybody had been up to. We will be doing the same thing again this August. If you would like to share your project, send me some information on what you have done. It can be a PowerPoint presentation (3 slides max!), some pictures or bring it in and show it off. You still have plenty of time to work on something.

### **Virtual Shack Tour**

I would like to try a Virtual Shack Tour this year at the September. The format would be simple – take a couple of pictures of your shack and talk about it for a few minutes. As we get closer to September I'll provide some more guidelines for format, what information to share and how much time to allow. I'd be interested in hearing from you before then to see how many people would be interested in talking about their shack.

The monthly program is the highlight of the Ozaukee Radio Club meeting. We are fortunate to have a number of very talented people in our club, many of whom have shared their knowledge through a presentation. Share your expertise and experience with the club. Programs can be on any topic that is ham radio related. Contact Pat Volkmann W9JI at [w9ji@arrl.net](mailto:w9ji@arrl.net) to discuss your idea for a program.-Pat, W9JI

**Tri-County HAMFEST 2020 – Sun., March 15<sup>th</sup>, 8:00 AM**  
Jefferson County Fair Activity Center  
503 N. Jackson Ave., Jefferson, WI

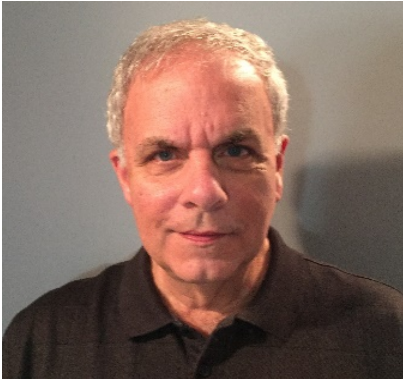
**MRAC/MAARS Swapfest – Sat., April 4<sup>th</sup>, 8:00 AM**  
Elks Lodge #46, 5555 W. Good Hope Road, Milwaukee

**MARA (Madison) Hamfest – Sat., April 18<sup>th</sup>, 8:00 AM**  
Mandt Community Center, 400 Mandt Parkway, Stoughton WI

**ORC Spring Swapfest – Sat., May 2<sup>nd</sup>, 8:00 AM**  
Columbia St. Mary's Center, Cedarburg

# Vintage Amateur Radio

de Bill Shadid, W9MXQ



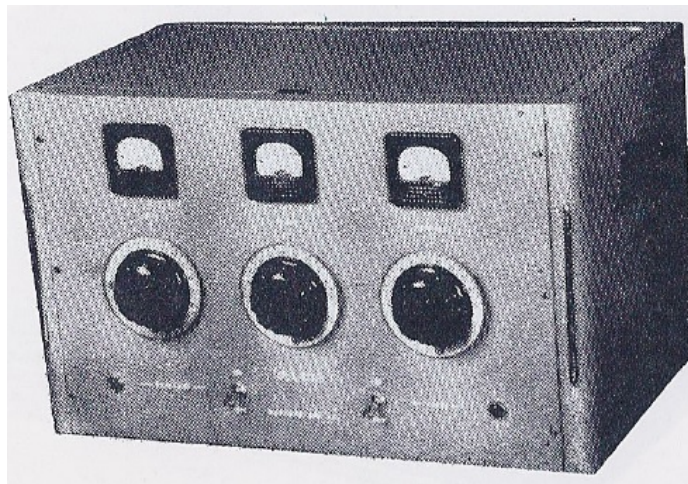
This article finishes the presentation of popular, and not so popular, 811 and 811A Triode Amplifiers. For this last installment it would be my opinion that the amplifiers included were not very popular in their day and are almost completely unknown today.

We have four products to discuss in this third group. They come from three manufacturers. In addition, I will briefly mention two other amateur radio products that used the 811 series tubes but not as Power Amplifiers.

We will see both 811 and 811A tubes used in products in this article. For reference, advertised plate dissipation of the 811A is 65 watts and the 811 is 50 watts.

The oldest of the Power Amplifiers in this group is from a company named Elenco, short for Electronic Engineering Company, of Wabash, Indiana. Elenco was an early player in the up and coming Single Sideband mode that grew rapidly in the 1950's. As far as I can tell, the Electronic Engineering Company (Elenco) talked about in this article is not related to the Elenco of today that sells electronic educational and test equipment.

While Elenco made numerous products in the mid-1950's, within that product line they made one linear amplifier that utilized 811A triodes. This was the Elenco PA-400.



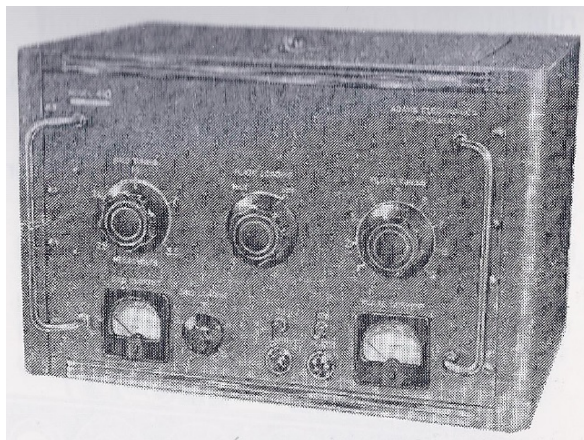
**Elenco PA-400 Linear Amplifier**

Moore<sup>1</sup>

The model PA-400, made in 1953 and 1954, utilized its two 811A tubes to produce an input power of 400 watts – as noted in its model number. The amplifier operated the two amplifier tubes in a push-pull circuit that required a very low drive at less than 8 watts. It utilized a swinging link tank circuit – as did several other transmitters of that day and even more so going back in time from the 1950's. It is regrettable that so little remains as to design details. Research did not come up with a tube compliment other than the two 811A's. It must be assumed, knowing that the plate voltage was 1,400 Volts, that rectifier tubes were part of the package. That is to say that in 1953 suitable solid-state devices for rectifying that voltage did not exist – at least not any priced for amateur radio use. This radio's information does not include band coverage but

exciters from Elenco at the same time focused on 80 meters only. It is safe to say that there is at least a good chance that was the coverage of the PA-400 as well.

Just a bit later than the Elenco PA-400 came two offerings from Adams Electronics Corporation of Amityville, Long Island, NY. Like Elenco, Adams supported the new single sideband market. Unlike Elenco that made transmitters and linear amplifiers, Adams only manufactured linear amplifiers. They were not long on the market but in their time, they made two 811A linear amplifiers and one using a single 4-400A. For Adams we will talk about a rather different approach. They made two different Amplifiers – but they looked the same – as you can see here . . .



**Adams AEC 410 and AEC 420 Linear Amplifier**  
Moore<sup>1</sup>

The earlier of these two amplifiers, the AEC 410, had an 80-10-meter band switched input circuit but used plug in tank circuit coils. The later AEC 420 was almost identical, from what information is available, but used a band switched input and output tank circuit. No historical documents show them physically different (or the same, for that matter). Both the AEC 410 and AEC 420 used a pair of 811A tubes in the final amplifier. Again, as noted with the Elenco PA-400, there is no surviving information that was found to show how the power supply is designed except that it was rated higher than necessary, at 1600 volts and 325 mA, for running an input power of 400 watts. These amplifiers required three to ten watts of drive power to get 400 watts PEP input on single sideband.

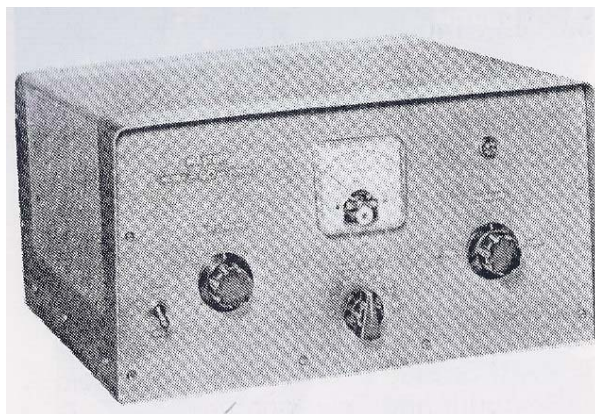
It should be mentioned that the plug-in coil final amplifier tank circuit in the AEC 410 was a swinging link design while the band switched tank circuit in the AEC 420 was of the now more common pi-network design.

Another entry into this market was a linear amplifier designed primarily for mobile operation from a 12-volt automotive battery and electrical system. Back in the 1950's and 1960's most hams were familiar with a brand called, Master Mobile. That was the trade name for Master Mobile Mounts, Inc., of Los Angeles, CA. Their main product line included a wide variety of mobile mounts for putting high frequency antennas on automobiles. They offered bumper and body mounting options. I used a Master Mobile Bumper Mount for a Newtronics antenna system on my 1962 Mercury that I was driving when I got my ham license in 1964.

In 1963, Master Mobile offered their own 811A Linear Amplifier in their model K-73. The K-73 covered the 80-10-meter bands. Pushing two 811A's to very limit, and perhaps a bit beyond, was the 750-watt PEP input power level of the amplifier. Specifications would indicate to me that is over driving the 811A's, but I do not have details like plate voltage, etc., so it is difficult to figure out Master Mobile's thinking and design. The power supply appears to have been solid state



with a relatively high frequency AC conversion scheme from what I have learned – and that seems appropriate given the voltage and power – far more than a typical dynamotor could provide.

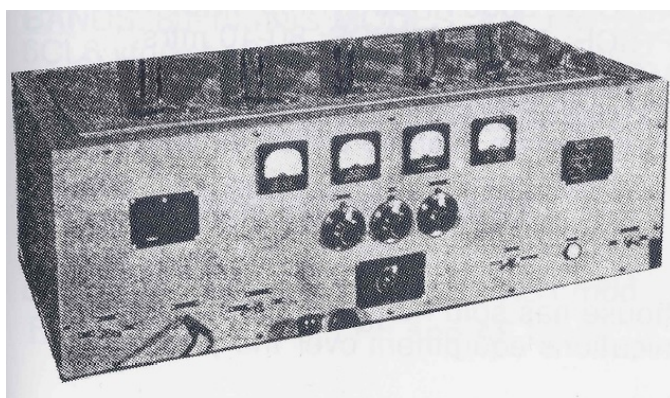


**Master Mobile K-73 Linear Amplifier**  
Moore<sup>1</sup>

The amplifiers in this article, except for the Master Mobile K-73, would have been produced with no switching for an exciter. That interconnection design between exciter and amplifier would have been the responsibility of the user to design. The factory may have included some thoughts on such a design, but I can say that amplifiers from the 1950's, with a few exceptions, were devoid of any such information. Using any of these Linear Amplifiers with a modern exciter would be problematic due to low voltage and current switching capability of today's radios.

Finally, we need to cover what I will call "Honorable Mention" 811 / 811A radios. There were two radios that both used two 811A tubes but not in the power amplifier. I am only showing them because they show another good application of this tube design – a high power audio amplifier to be used in the modulator section of plate modulated AM transmitters.

The first of these is the oldest in this 811 / 811A series. And, this one predates the 811A tube and used the original 811 version. This is the Meissner 150-B Amplifier/Modulator.



**Meissner 150-B Amplifier/Modulator**  
Almost a stand-alone power amplifier – but really an accessory  
Moore<sup>1</sup>

This radio was a plate modulated AM and CW transmitter with an 813 final amplifier that was plate modulated with a pair of 811 triodes. This was an accessory for use with the Meissner Variation 2 Signal Shifter Transmitter from 1943 and through World War II. They were meant to



form a higher power transmitter when coupled to the Signal Shifter. For reference, the picture below is the Variation 2 Signal Shifter as used with the 150-B:



This picture is typical of the Variation 2 product under models 9-1077, 9-1078, and 9-1080. These dated from 1943 and through World War II. This little Transmitter/Exciter produced 7.5 watts output using ham band and general coverage (HF) RF coils. It was intended to run alone or with the 150-B Amplifier that had a complete audio circuit and modulator. Although low in power, the Signal Shifter could operate barefoot.

The Meissner 150-B Amplifier/Modulator units survived WWII and were sold in the ham radio market as surplus radios. They would be very, very rare and maybe completely unavailable today. The Signal Shifter in its three Variations is hard to find, but available with patience even to this day. Two friends of mine, W9DYQ and W9JI, own and use a Signal Shifter in its final variation<sup>3</sup>. My own Signal Shifter is the same model as the one owned by my two friends.

Meissner was a company founded sometime before WWII in Mount Carmel, IL, located about 275 miles south of Chicago in southeastern Illinois. In later years Meissner became part of Thordarson Transformer and thereafter known as Thordarson-Meissner. Thordarson-Meissner exists today with an extensive line of transformers and other products under the Thordarson Magnetics name (and a subsidiary of Thordarson-Meissner).

The second of these two "Honorable Mention" radios is probably the only one in this article that is widely known. In the time span of 1956 to 1963, the E. F. Johnson Company of Waseca, Minnesota produced a high power (500-watt) transmitter known as the Viking Five Hundred (or, simply "500"). It used a 4-400 tetrode final amplifier that was plate modulated by a pair of 811A Triodes.



The Johnson Viking 500 was a massive, 173-pound radio in two cabinets. The desktop unit held all the RF components and control circuitry while the second unit (intended to sit on the floor) contained the power supply and modulator components. This unit provided 500 watts input of plate modulated AM Phone and 600 watts input on CW.

EF Johnson 1961 Catalog

E. F. Johnson is one of the oldest names in ham radio – and at the same time one of the oldest names in radio itself. Now a part of JVC/Kenwood, Johnson still markets a large line of two-way commercial radio equipment under the Kenwood Viking™ trade name.

You have seen three articles now on 811 and 811A amplifiers. Did I miss any that you know about? There were several in the CB Band market that hold no interest for me – but if you know

of amplifiers intended for the amateur market, let me know about them and what you know about them.

I appreciate that you read my articles. Remember that I am open to questions and comments anytime at my email address, [W9MXQ@TWC.com](mailto:W9MXQ@TWC.com).

A special note of thanks to my proofreader, Bob Bailey, W9DYQ. Bob is a bit more than a proofreader as he often adds commentary that makes it into the article.

#### Credits and Comments:

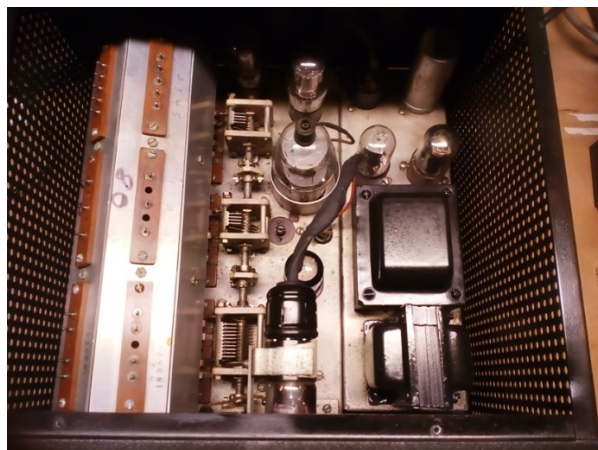
<sup>1</sup> Moore is Raymond S. Moore, author of numerous books on Vintage Receivers and a single book on Vintage Transmitters. I used pictures from Moore's book, *Transmitters Exciters and Amplifiers – 1930-1980*. RSM Communications, Key Largo, FL USA. ©1996 ISBN 0-9618882-3-7. Moore's books are out of print and generally unavailable except perhaps at a used bookstore or at a hamfest. Moore also wrote a variety of books on home education, children's books, religious books, and other subjects. I cannot determine Mr. Moore's current status.

<sup>2</sup> All the amplifiers in this article required high current at high voltages to switch between transmit and receive. That was no problem for transmitters and transceivers of that same era. Modern exciters, however, can only accommodate low voltages at very low current.

<sup>3</sup> Friends and fellow collectors, Bob, W9DYQ, and Pat, W9JI, own and use Meissner Signal Shifters in their final variation – the model EX. My own Signal Shifter is also a model EX. The Signal Shifter in its several Variations may be the topic of a future article by W9DYQ or W9JI or W9MXQ – or a collaboration of all three.



Meissner Signal Shifter EX – Front  
W9DYQ



Meissner Signal Shifter EX – Interior  
W9JI

**W9MXQ**

# Ozaukee Radio Club

## February 12, 2019 Meeting Minutes

de Ken Boston W9GA



Newly elected president Pat W9JI called the meeting to order at 7:30 PM, introductions followed for the gathered members and guests.

### Announcements:

Tom KC9ONY commented on FT8 contacts to El Salvador, Kevin K9VIN mentioned that he had some mobile antenna damage caused by the wife backing the car into an obstruction.

### Program:

Pat W9JI then introduced Bill W9MXQ, who presented a video showing a history of the Drake model TR7B and TR8 radios and the L85 linear amplifier, which were some of the last radios the R L Drake company marketed. The company subsequently moved into satellite TV products, and suspended ham radio products.

Pat W9JI then promoted the future program scheduled to be presented by Vic WT9Q at the next meeting. Pat also introduced Tom KC9ONY, who is selling tickets and tables for the upcoming spring swap-fest.

**Break:** The membership took a 5-10 minute bio break.

Upon reconvening, the 50/50 action was held; Bill Large KD9HLN was the winner, of a \$12 prize.

**Auction:** Stan WB9RQR then conducted an auction; items included bags of fans, 12 VDC P.S., variable capacitors, a Dell desktop computer running Linux, a small hard drive and some DVDs

### Committee reports:

There was no 1<sup>st</sup> VP report.

There was no 2<sup>nd</sup> VP report.

Repeater VP Tom KC9ONY reported a 222 desense RX problem, and that the BOD had approved the purchase of a new 146 MHz amplifier for the system update. A 100 watt amplifier had been selected, with a reduction in price from the earlier choice of a 150 watt unit

Secretary (outgoing) Ben K9UZ presented the minutes for the January 2020 meeting via a link to a dropbox. Bill W9MXQ moved and Stan WB9RQR seconded to accept minutes; motion passed.

Treasurer (new) Gary N9UUR has converted the books from Quickbooks to a spread sheet format, copies provided to the membership. Jim K9QLP moved and Todd N9DRY seconded to accept the treasury report, motion passed.

The budget was then discussed and approved, motion made by K9DJT, seconded by Jim K9QLP and motion passed.

The audit committee (Gary N9UUR and others) presented their review; the audit was accepted by motion made by Kevin K9VIN and seconded by Ben K9UZ, voted acceptance by the members.

The repeater committee has been formed, chaired by Mike KD9GCN, who asked for membership input.



The ballots for the Ham of the Year and Turkey of the Year were distributed by Ken W9GA, who encouraged members to nominate deserving candidates for these awards, and asked to indicate anyone they deem worthy of any of the other awards, and add them in the margins.

**OLD Business:**

Tom KC9ONY urged the membership to use the repeater system, and talk up the ORC club activities on the repeater systems.

Also, Ben K9UZ noted that he has the current membership directories in his hands and is distributing them widely to the members.

**NEW business:** none was presented.

**Adjournment:** A motion to adjourn was made by Gary K9DJT and seconded by Stan WB9RQR, motion carried and the meeting was adjourned at 9:15 PM

30 members and 2 guests were present. Contact Ken W9GA to obtain the list.

Respectfully submitted;



Kenneth Boston W9GA  
Secretary

## ORC Meeting Agenda

*March 11, 2019*

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to Order – President Pat Volkmann (W9JI)
3. Introductions
4. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
5. Program: Vic Shier WT9Q, Selecting & Installing a Vertical Antenna
6. Fellowship Break
7. 50/50 Drawing
8. Auction – Stan Kaplan (WB9RQR)
9. President's Update – Pat Volkmann (W9JI)
10. 1<sup>st</sup> VP Report – Ben Evans (K9UZ)
11. 2<sup>nd</sup> VP Report – Bill Church (KD9DRQ)
12. Repeater VP Report – Tom Trethewey (KC9ONY)
13. Secretary's Report – Ken Boston (W9GA)
14. Treasurer's Report – Gary Bargholz (N9UUR)
15. Committee Reports
16. OLD BUSINESS
17. NEW BUSINESS
18. Adjournment to ?

Return undeliverable copies to:

### **The ORC Newsletter**

524 Alta Loma Drive  
Thiensville, WI 53092

### **First Class**

#### **Next ORC Meeting:**

Grafton Multipurpose Senior Center

1665 7<sup>th</sup> Avenue, Grafton, WI  
Wednesday, March 11<sup>th</sup>, 2020

7:00 PM – Doors Open

7:30 PM – Meeting Begins