



# FEEDBACK

## The Official Newsletter of the Georgian Bay Amateur Radio Club

November 2020  
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### 2020 Executive

President .....Tom VA3TVA  
Vice-President... Frank VA3GUF  
Treasurer.....Bobby VE3PAV  
Secretary.....Peter VE3BBN

## President's Message



November 2020

Wow. Another month already. Time flies.

For those who haven't heard, John Corby will be the new Club President. So, only one more message for me to write, then I hand it over to John. John is hitting the ground running, and he has a wealth of experience to draw upon. My own well of experience is rather shallow and muddy. I'm looking forward to supporting John in any way that I can. I hope that all of our membership will as well.

To be honest, I haven't looked at anything club related aside of a couple of emails since the last meeting. I really don't have much club related to report. I've read reports that the solar minimum has ended, and that is good news for all of us.

Frank is preparing the Fox Hunt. I'm looking forward to it.

I wish that I had more club news to report. Covid has put in-person meetings and club breakfasts on hold indefinitely. I really miss the club breakfasts.

I hope that everyone stays well and healthy. And try to keep the static out of your coax.

73

Tom TVA



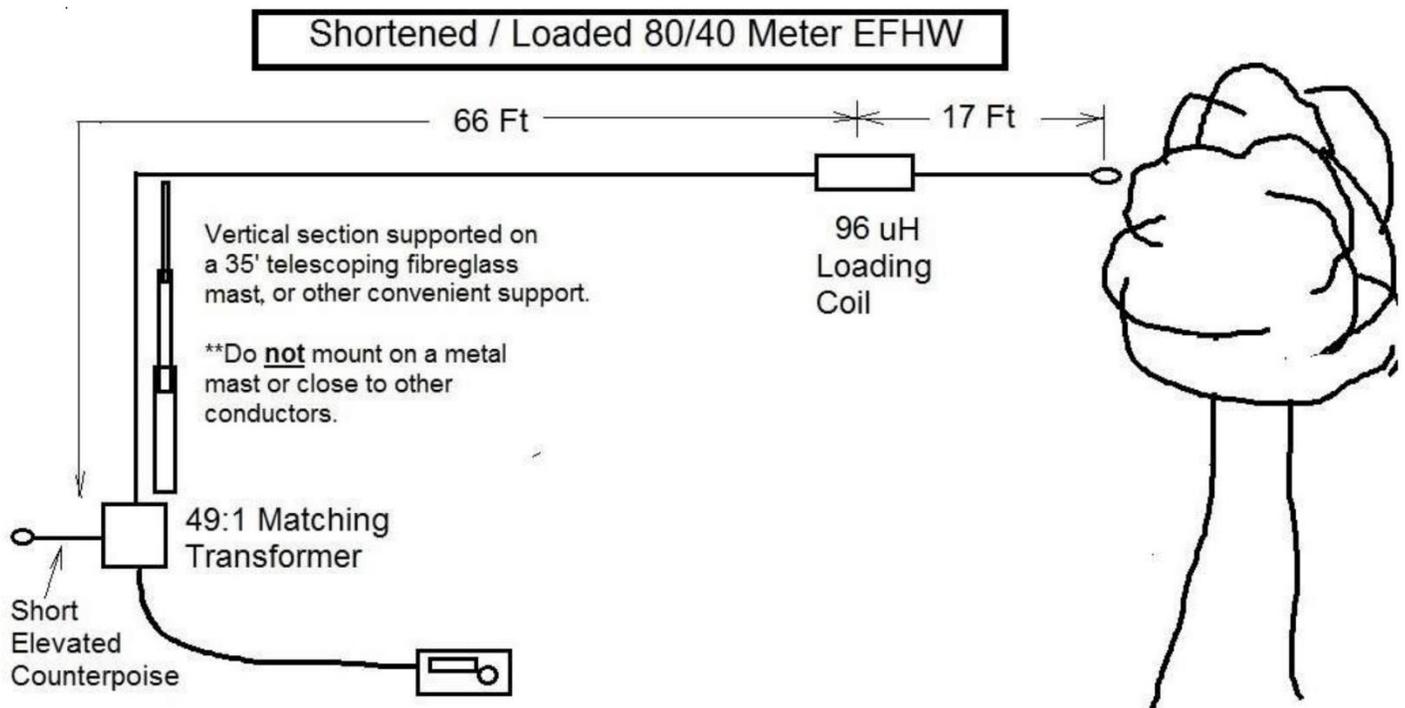
# The End Fed Half Wave Antenna Part 3 of 3



*Thanks to Rick Reeve VE3ORY for his kind contribution to our newsletter.*

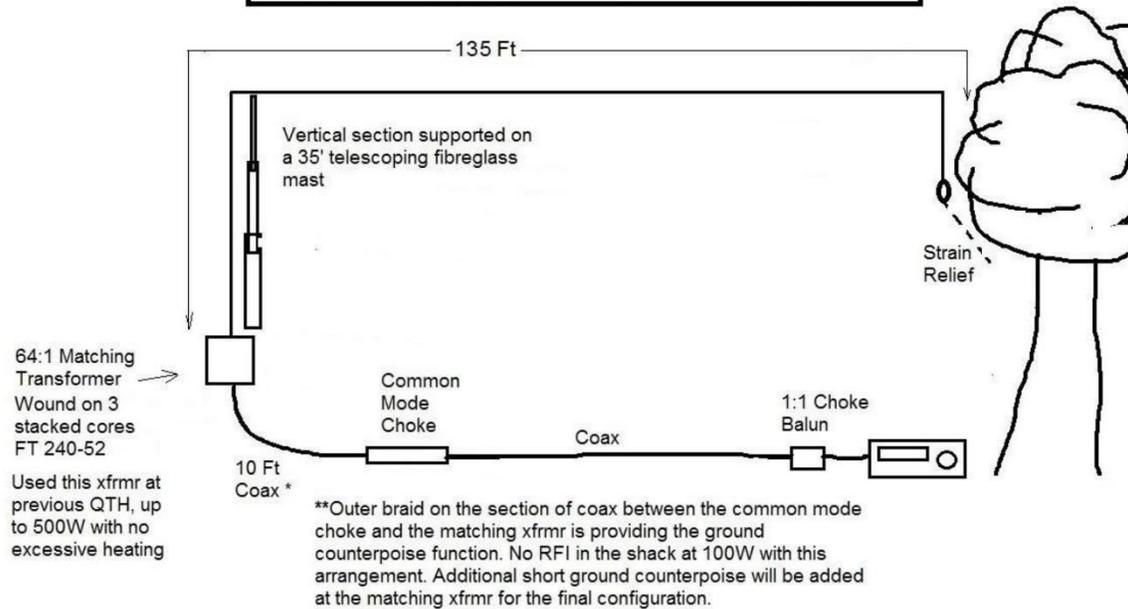


This antenna initially built and tuned as a 40m EFHW, then added a loading coil and short additional wire which was trimmed to resonance on the desired 80m frequency. High inductance of the loading coil effectively isolates the added 80m section from the original 40m antenna. It worked well on both bands.

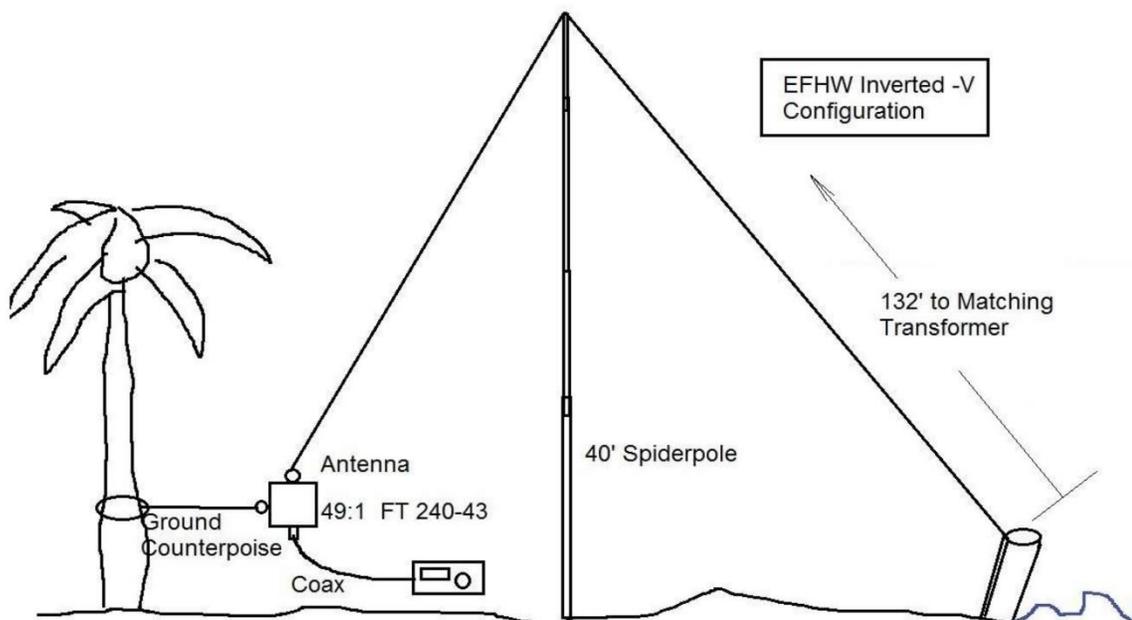


This antenna is tuned for resonance just below the 80m band but it is exactly resonant over a good portion of the low end on 40m which was my primary aim. The transformer is wound on **3 stacked FT240-52 cores** to afford high power capability without excessive heating of the cores. The result is an SWR that is slightly high (3:1) at the bottom of the 80m band but less than 2:1 across the entire 40m band, and easily capable of handling 500 watts input with long duty cycles. The antenna is easily useable on the other bands with my antenna tuner and seems to be performing well in spite of its' low height above ground.

**Current Temporary Antenna at the New QTH - 135' EFHW**



This is the configuration used extensively over 3 winters in Florida operating from the shores of Tampa Bay. The antenna was completely portable, and set up several times a week in various locations. I routinely checked into a weekly Olivia net running 50W and usually did well into Chino Valley AZ, Chance Harbor NB, Deep River ON, and Oakton VA. Also worked CW at 80W into Vancouver Is., Curacao, St. Barthelemy, Honduras, Spain and Switzerland, and much of the U.S. The nearby salt water probably helped, but I was very pleased with the operation of this antenna.

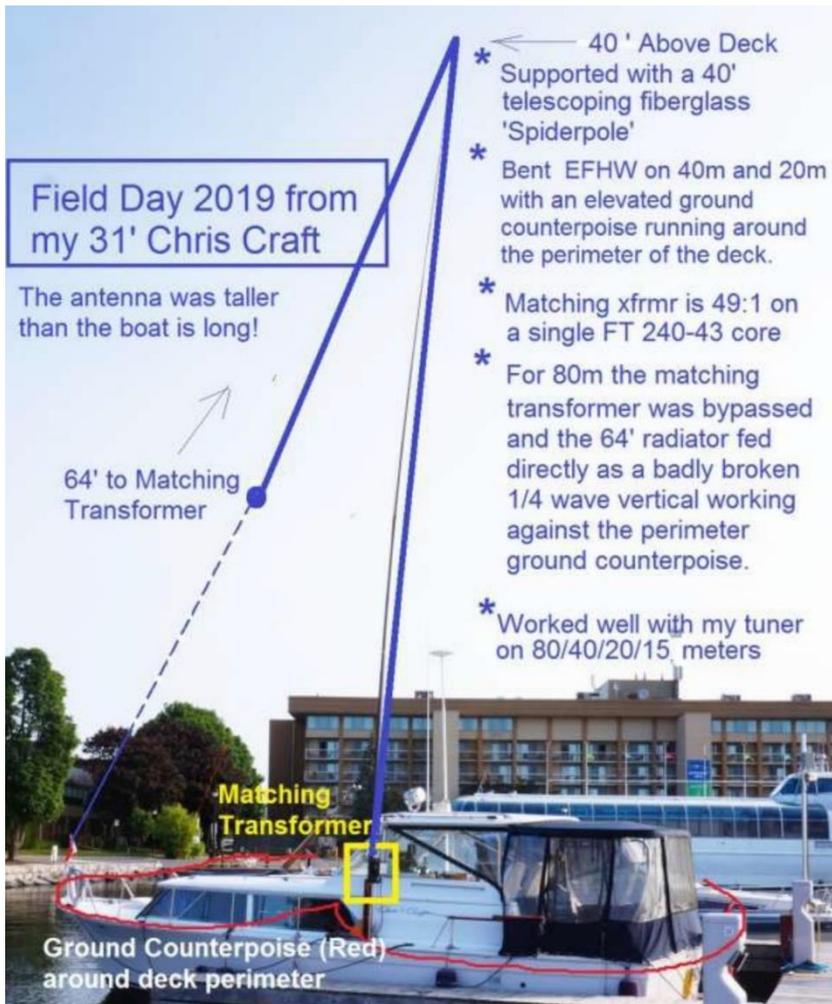


The telescoping Spiderpole mast mounted to a home brewed drive on base for portable operation. This photo taken at Fort De Soto park near Tierra Verde right on the inlet to Tampa Bay.



.Digital and CW mode operating from Ft De Soto Park, using a battery powered TS-570 at 60 watts to the EFHW antenna supported with the Spiderpole and nearby palm trees (which were not very high). But a great way to spend a winter day, with breaks from the radio to do some kayaking!





Another variation that I came up with while wintering in Florida, configured so that I could connect a 1/2 wave radiator to the matching transformer, or I could bypass the transformer and feed the radiating element directly and work it as a vertical antenna against a raised ground counterpoise.

I adapted this arrangement to our boat for last years' Field Day event and had a lot of fun working 206 CW contacts. The only time that my wife agreed to letting me set up a ham radio station in the boat. And it had to be removed immediately after FD.

I've never been able to convince her that it would be beneficial to have ham radio on our Chris Craft.

I don't understand why my wife would be opposed to leaving this set up in the boat!



Steve Dick, K1RF has an excellent PDF tutorial on EFHW antennas that is well worth reading for more information on these antennas.

Clicking on this URL should take you to the website...

<http://gnarc.org/wp-content/uploads/The-End-Fed-Half-Wave-Antenna.pdf>



Portable operating for the 40m Tuesday night Olivia net from a site at our Florida condo , using the EFHW antenna.



73 de Rick VE3ORY



## Join us for our weekly get together “On the Air”

The club meets each Wednesday evening on VE3OSR 146.940 T97.4 hz at 7:30 pm local time, and on 3.783 Mhz +/- immediately following.

## Websites of Interest Copy/Paste the urls below into your browser

### **The Spectrum**

<https://spectrum.ieee.org/tech-history/space-age>

### **RF Step Attenuator**

<https://www.arrl.org/files/file/Technology/tis/info/pdf/9506033.pdf>

### **RPiTX Beta for Raspberry Pi 4 Released**

<https://www.rtl-sdr.com/rpitx-beta-for-raspberry-pi-4-released/>

### **Skywave Linux**

<https://skywavelinux.com/>

### **Drawboard PDF**

<https://www.drawboard.com/pdf/>

### **The Rhythm of the code**

[https://www.youtube.com/watch?v=2\\_qQZ92onhU](https://www.youtube.com/watch?v=2_qQZ92onhU)

### **Restoration of BoatAnchor radio equipment**

<http://www.philipstorr.id.au/radio/technical/Boatanchor%20Restoration.pdf>

### **Portable Amateur Radio Operations**

<https://wd8rif.com/pdf/PortableAmateurRadioOperations.pdf>



# Operate ham radio outdoors?

By John VA3KOT

Are you kidding me? Is that an insane idea or what? Frankly, you would have to be quite mad to even think about it. Ok, that's me, quite mad ... as a hatter. Bereft of any sense of good judgement I drag my portable radio kit out into the wilderness every spring, summer and fall and get on the air in the great outdoors.



Let's face it; the weather in Ontario sucks. In the spring the ground is soaking wet from all the melting snow. In the summer it often gets too hot and humid for human existence. In the fall it rains, rains, rains. In the winter ... well let's not even talk about Ontario winters. The local bears have more sense than us; they hibernate.

I have two brothers; one lives on Spain's Costa del Sol and the other lives in Brisbane, Australia. Both of those places make Ontario's summers look tame. In the cruel depths of winter my siblings sometimes have to throw on a sweater to keep away the chill on those rare occasions when the temperature drops below double digits. I keep quiet about Ontario's weather - they laugh at me.

Bug bites or frost bite? How are you supposed to operate a radio with all that going on? And that supposes you can even get as far as turning on your radio. First you have to hike for miles down a miserable trail full of protruding tree roots, rocks, potholes, Massassauga rattlesnakes, black bears, deer flies, mosquitoes and every other pestilence known to mankind. While wearing a heavy backpack!

In the unlikely event you make it to your operating position without twisting your ankle or being eaten by some malevolent beast, you will probably discover that you left your coax at home anyway.

Now you have the task of getting a wire up into a tree. If all the planets are favourably aligned you might get lucky, but probably not. The perfect location you hiked for hours to reach only has evergreen trees. Evergreen trees are sent by the Devil to snag your throwing line. They are often covered in a resinous slime that turns pulling up your antenna into an Olympic sport.

After hours of toil and trouble you are all set up and turn on the radio. Finally you are ready to operate. A quick scan of the bands; find an unused frequency and fire off a few CQs. Nothing. Nobody comes back to you. But never mind; playing ham radio outdoors is so much fun!

Postscript: I have been operating outdoors for nearly twenty years and it is actually my favourite ham radio activity. I really don't know why. I just get an immense feeling of satisfaction from doing it. Yes, I have reached my destination only to find I left my coax at home. I have waded through mud bogs with a heavy pack on my back. I have operated on the very edge of a cliff (Skinners Bluff) and in a searing, cactus filled desert (the incredible Dinosaur Provincial Park, Alberta). Many times I have returned home with an empty log (but it was fun?).



Just recently I have discovered the Parks On The Air (POTA) program which really is fun and guaranteed to fill up my logbook in a hurry. And best of all, I have never been eaten by a bear. Wait, what was that noise?

## Understanding Radio Receiver Dynamic Range

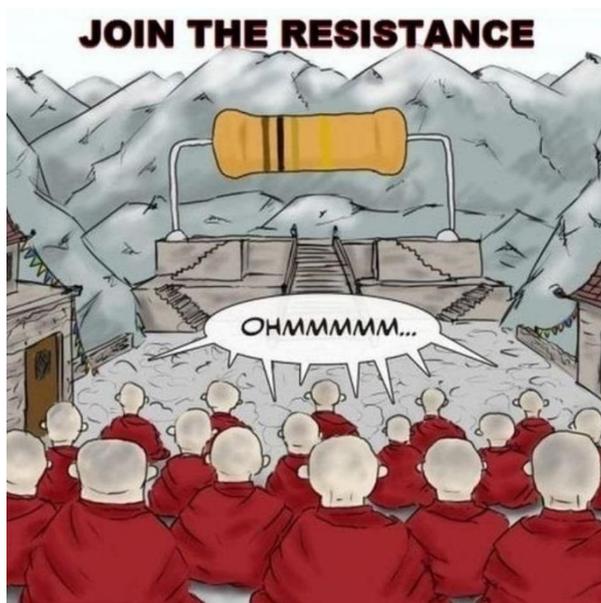
The dynamic range of a radio receiver is probably more important than pure sensitivity. If the radio cannot handle strong signals, then these strong signals can have the effect of masking weak signals that need to be received. It is no use having great sensitivity, if the receiver cannot work under the conditions it is likely to encounter in real situations.



Good dynamic range is not easy to achieve. It requires good RF circuit design techniques to be employed, and good quality, and often more expensive electronic components, and particularly the RF mixers.

The dynamic range specifications for radio receivers can be quoted in different ways and they can use different measurement techniques. Accordingly, understanding dynamic range and the specifications used is needed if different receivers are to be compared on a like for like basis.

Read more: <https://www.electronics-notes.com/articles/radio/receiver-dynamic-range/what-is.php>



# Minutes of Meeting

## GEORGIAN BAY AMATEUR RADIO CLUB

### MINUTES OF OCTOBER GENERAL MEETING

DATE: 31 OCTOBER 2020

LOCATION: Harrison Park, Owen Sound

**CALLED TO ORDER:** by President Tom Van Aalst at 0915

#### **ATTENDEES:**

Tom Van Aalst VA3TVA, Tom St Amand VA3TS, John Corby VA3KOT, Phil De Kat VE3QVC, Adam Karasinski VE3FP, Doug McDougall VE3DGY, Dan Mills VA3DNY, Bernie Monderie VE3BQM, Dave ewcombe VE3WI, Bobby Pavlovic VE3PAV, Jim Reeves VE3JMD, Rob Walker VE3RWY  
IS THERE A QUORUM? No Quorum, only two Executive members present.

#### **TREASURER'S REPORT**

The current financial status was presented.

Dues for 2021 are trickling in.

Our major upcoming expense is the group insurance policy through RAC. The rate is increasing but we don't know the final premium yet. The value of maintaining insurance was questioned, as most of our public activities have been cancelled due to COVID. This issue will be discussed by the new Executive.

The possibility of setting up electronic dues payment was investigated. Since the club bank account is Commercial, enabling e-transfers would cost \$15/month, which was deemed excessive. Bobby will investigate setting up a private account for free e-transfers, with the funds being then transferred to the club account.

#### **ELECTIONS FOR 2021-22**

John Corby was elected President. Tom Van Aalst will assume the Vice-President role.

Rob Walker was elected Secretary by acclamation.

Bobby Pavlovic will remain as Treasurer, as provided in the Constitution.

GBARC thanks outgoing Vice-President Frank Gufler and Secretary Peter Richards for their contributions.

#### **MEETING FORMAT GOING FORWARD**

A pilot online meeting using Zoom on Wednesday night went well. Future meetings will be conducted using Zoom, until face-to-face meetings become possible again. If necessary, the 40-minute time limit for Zoom's free plan can be circumvented by closing the meeting and starting a new one.



## FOX HUNT

The fox hunt is planned for the last two weekends in November. The possibility of an online Zoom pre-meeting to discuss plans, techniques, etc. was discussed. More information to follow.

## CHRISTMAS LUNCH

The lunch is cancelled this year due to COVID. If/when conditions permit, a BBQ in the spring will be planned in lieu.

## HAM OF THE YEAR

Nominations for 2020 Ham of the Year are solicited from all members. Contact the President.

MEETING ADJOURNED AT 0950

## Letters to the Editor

Thought this was a good overview video on using the nanoVNA and why you would want one. [https://www.youtube.com/watch?v=\\_pjcEKQY\\_Tk](https://www.youtube.com/watch?v=_pjcEKQY_Tk)  
73 Carl VE3APY

## Elections 2021/22

The new Executive will assume office on 1st Jan 2022



John VA3KOT



Tom VA3TV



Bobby VE3PAV



Rob VE3RWY



Frank VA3GUF



Peter VE3BBN

Congratulations to all and thanks to Frank VA3GUF and Peter VE3BBN.



# The Last Word

A few words of appreciation to those that contribute to this newsletter by submitting news stories or interesting web links or ideas. If you have something then send it to <https://gbarc.ca/mailus.php>, any format, any size, anytime, but if you want it to appear in the current months newsletter, then send it by the 3<sup>rd</sup> Tuesday of the month.



**Help US Out** Would you like to receive email notifications when this newsletter is posted? Sign up for our mailing list. We only send out a few mailings a month and you can unsubscribe at any time. No ads and no personal information, your email address is never shared with anyone else. <https://www.gbarc.ca/lists/?p=subscribe>

**Membership** for details regarding membership in the club go to: <https://www.gbarc.ca/gbarcmembers.php>

The next newsletter will be in December.

## When Your Rotator Dies?

Carl C. Drumeller WSJJ  
5824 NW 58 St.  
Warr Acres OK 73122

**T**he Problem: After several decades of faithful service, the control unit of my Ham-M rotator ceased functioning. A postmortem examination revealed a

dead 130-microfarad, 50-volt alternating-current motor-starting capacitor.

The Non-Solution: A quick survey of electronic supply stores showed that no such capacitors were available. A visit to electrical supply houses revealed numerous motor-starting capacitors, but none was physically small enough to fit into the space within the control unit housing.

The Solution: Two 150-microfarad, 50-volt electrolytic capacitors and two 100-volt, 3-Ampere silicon rectifiers were used in the

circuit shown. The control unit was resuscitated.

Another interesting situation came to light during the repair job. The meter had been intermittent, sometimes operating normally, sometimes quite dead. The cause was the 1/16-Ampere fuse used in series with it. This is indeed unusual. A fuse normally is fully conductive or unmistakably open. This one probably had a mechanical discontinuity instead of having been blown. The original one was soldered in place, an action fraught with peril to the delicate in-

terior conductor. A clip-type fuse holder was installed to minimize the probability of future trouble.

For those interested in the theory of the functioning of the circuit, the explanation is simple. During any half-cycle, one capacitor is shorted by its associated diode. It might be presumed that having two capacitors in series, the resultant capacitance would be halved. This, however, is not the case because the diode acts as a bypass for the capacitor during every half-cycle. ■



Fig. 1.

