

## Q5er – The Official Newsletter of the Skyview Radio Society

*It is Membership Renewal time.*

*Watch your mailbox for your Renewal Notice.*

### Coax Sealing Tape

As Radio Officer for Skyview I end up putting on a lot of coax connectors, installing them and sealing them up. If you install connectors on Helix, the connectors come with a coax seal kit and includes some really nice 2 inch wide electric tape. Each connector comes with substantially more sealer and tape than you need.

Whenever I am at hamfests I always look for spare sealing kits being sold by people in the industry. They usually sell them at a very good price, MUCH less than you would pay for them normally. With the total lack of hamfests this year I ran out of the 2 inch tape. With no relief in sight I figured I'd better be looking for a supply of this good stuff.

I found it on eBay! It is Scotch Super 88 – 2 inch wide tape. Nice! I bought it and it is even better than the stuff that comes with the Andrew (brand name) connector kits. The part number is 5400710356. The roll is 36 yards, so you should be good for a very long time. It is really great for sealing coax connections and much more.

That's my tip of the month for you.

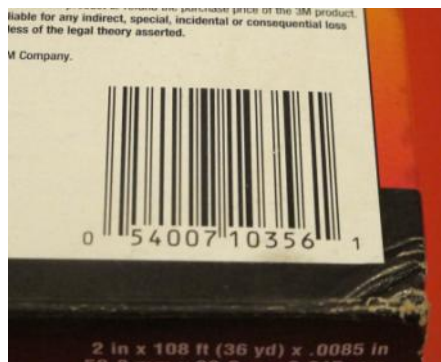
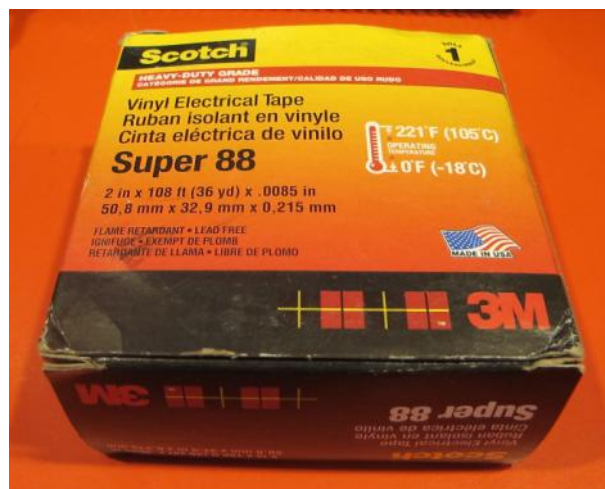
Cooky - WC3O

December 1, 2020

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- And More . . . . .

**The Sunspots Are Coming**

**The Sunspots Are Coming**



**2020 is Skyview's 60th Anniversary !!**

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## **The Skyview Radio Society Clubhouse is the “Every Tuesday Place” . . .**

Something is going on at ‘the joint’ each and every Tuesday evening, from about 1900 hours to whenever.

See the general schedule of Tuesday events on the Skyview Web Page: <http://www.skyviewradio.net>

For the latest up-to-date plan, check the Groups.io Reflector at : <https://groups.io/g/K3MJW>

Directions are on: <http://www.skyviewradio.net>

Guests are always welcome !!

### **From the Editor**

Rich - WQ3Q has a great article in this issue on preparing a tower base - keep it for future reference.

Bob - WC3O continues to educate us by sharing with us his knowledge of the tools of the trade

Who is your Neighbor? is very interesting. New license holders are popping up all over. It used to be that a prospective ham would see your antennas, bang on your door, say that they were interested, ask to come in and see your station, and then ask how they could become a ham. Nowadays, with all of the online information that is available, there are a whole lot who just get themselves licensed on their own and suddenly are adding some more RF to your neighborhood.

**NOTE:** As this is being published, the Skyview Clubhouse is adhering to PA State Government requirements and is open at limited capacity.

**Members Only. Use at your own risk.**

Follow <https://groups.io/g/K3MJW> for updates.

Jody - K3JZD

### **From the Treasurer**

It is Renewal Time. No change to our Dues structure.

For those of you that are fairly new to Skyview, let me assure you that 2020 was anything but a typical year.

Just about every social event that we normally have had to be cancelled. We cancelled regular meetings at the clubhouse. All in the interest of keeping everyone safe.

However, we took a chance and still did most of our typical operating events at the clubhouse. And we did some maintenance and made some small improvements.

We had some larger improvements planned for 2020. They did not happen. We have rolled the funds that had been allocated for those 2020 improvements into 2021.

Too soon to predict how 2021 will be. At this time, things have definitely taken a wrong turn. However we are getting much closer to there being a vaccine available that we all hope will tame this beast.

I hope that you will remain a faithful Skyview Member as we go further forward into the unknown.

Jody - K3JZD

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Skyview Radio Society is recognized by the Internal Revenue Service as a charitable non-profit organization under Section 501(c)(3) of the IRS Code.      Donations to the Club are tax deductible to the extent permitted by law.
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<p><b>Ham Radio is a Contact Sport</b></p> <p><b>( Minimum QSO : 6'-0" )</b></p>
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## Dummy Loads

de Bob - WC3O

Who you callin dummy?

This article is being written more for the newer hams. You've likely heard of a dummy load before, but never really thought much about them. I think every ham should own at least one of these very useful gadgets.

They come in many different sizes, wattage ratings and frequency ranges. You can make your own, or buy one. What is a dummy load? In a perfect world all antennas would be 50 ohms. That 50 ohms would be 50 ohms of resistance and zero ohms of reactance.

Guess what? We don't live in a perfect world. A dummy load is a very close to perfect antenna that we can use for a reference. It only has one problem – It does not radiate! But as far as a transmitter goes, the dummy load looks like a perfect antenna. So in this way we can test a number of aspects of your antenna "system". Your system may include the radio, tuner, coax, switch, connections, lightning arrester, balun, and finally the antenna.

Why would you want one? For testing. Let's say the SWR went to hell and a handbasket on your 2 meter antenna or your tri-band Yagi. Is the problem the antenna, the coax, or something else? How can I trouble-shoot the issue? You can start from the beginning, the end, or somewhere in between. For our discussion let's start at the end. Your SWR is 3:1, but it was 1.2:1 not long ago. What changed? Disconnect the coax from the feed point of your antenna. Attach your 50 ohm load. Your SWR is still 3:1? That's not good? If all was right with the world it "should" read close to 1:1 SWR with a 50 ohm load attached! The next point back is the lightning arrester. Put your load there. Still 3:1? Hmmmm. Next stop is at your antenna switch input. Now it's 1:1. Hmmmm Put the load on the output of the antenna switch and it's back to 3:1. Why hell, there's your problem! Your antenna switch pooped the bed! Again, approach each situation in whatever order that makes sense or is convenient.

Let's talk about different types of dummy loads. Let's talk about this little guy. It is only rated for 15 watts. What can you do with that? These are great when



you're using an antenna analyzer. You put this little guy in your pocket and take it up on the roof, or tower. You don't need a high power load for the analyzer so the small load is perfect for what you're doing. These are also great if you are tuning a filter circuit or a set of duplexers. Very handy to have a little guy.

Now let's look at this MFJ air-cooled load. It is rated for 1500 watts? Yeah, right. That's 1500 watts until the smoke starts pouring out, and that would not be a very long time at 1500 watts! In reality I'd call this a good 100 watt load. These are great for testing your 100 watt



transceiver. At 1500 watts? As the late/great Jack Layton, W9UK/SK said, "At high power things usually

end with a bright flash and a loud BANG”. That is how this one would end at 1500 watts.

Now let's look at this old Heathkit paint can dummy load. Heathkit sold a bizzillion of these. Very easy to find



used. These have a 50 ohm resistor submerged in oil for cooling. Common oils used are mineral oil, or preferably transformer oil. You can still buy these new from MFJ. If you have an old one and you need oil – MFJ sells the oil too. These will handle 1500 watts for a short amount of time, usually enough time for you to do the testing or tuning that you need to get done. They are not a bad way to go, but not the best. One downside of this type of load is that they always leak oil. Keep that in mind. Keep it in an old bucket to keep the oil from ruining your floor or carpet. You'll be glad you did.

Now let's talk about the best way to go – BIRD Dummy loads. This one is rated for 150 watts. Now, with a BIRD load that 150 watts would be all day/all night and it would only get warm. Also, this one has a watt meter attached. You will also see BIRD loads like this without the watt meter. So what's wrong with these? Well, they're ugly. They don't look modern. But boy do they work well. If you see one of these on a table at a hamfest at a good price, I highly recommend that you buy it. It will last you a life time, and then some. This load is rated down to 125 MHz, but is also works well down in to HF frequencies. The watt meter has two scales, black and red. The scales are



changed between the switch and moving the diode detector location, which plugs into the two cavities on the front panel.





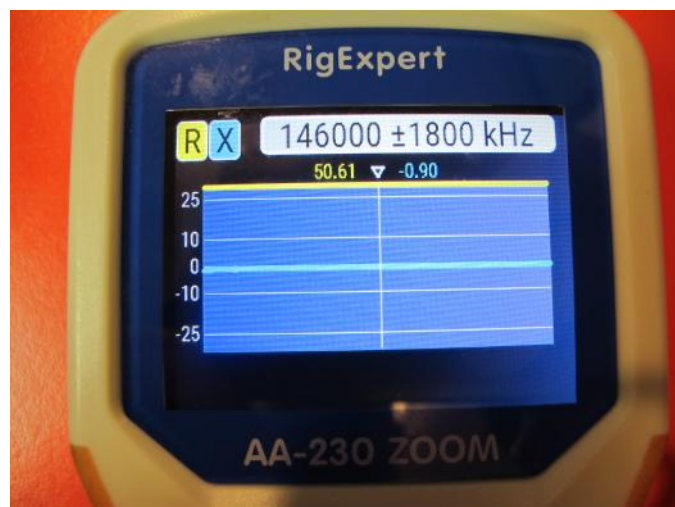
Now let's look at the big girl! This BIRD dummy load lives under the table at the clubhouse. This one is rated at 5000 watts! You could tune a 1500 amp for a month and this load wouldn't even notice. It is at-



tached to the main antenna switch (Full right button on the selector switch). You will see these at hamfests too. They were typically removed from service from an old TV transmitter and was used as a "reject load" for the antenna system. You'll see them rated for 500 watts, 1000 watts and larger. These things are great. For what you'll pay for a good modern dummy load, you'll pay less for these old BIRDS and they are WAY

better quality. Again, if it is rated at 500 watts, that is 500 watts all day/all night.

Here is a sweep of the 150 watt BIRD load at 146 MHz. Note the blue line. That is the reactance. Notice that it remains very near zero. That's good. The yellow line is the resistance. Notice that it remains very close to 50 ohms. That's good.



Your MFJ type loads are not this good. But luckily, for our typical needs in ham radio, they are just fine.

So, when buying a dummy load look at the stated frequency range it was designed for. Look at the power rating and duty cycle to see if it fits your needs. Every red blooded ham has one, or two, or six...

I hope you found this article useful. I hope that you consider buying a dummy load, you use it. It's a very handy tool.

Bob - WC3O  
Skyview Radio Officer

## Upgrading My Shack - Part 2

de Rich - WQ3Q



### Tower Base Preparations

The amount of concrete that I needed was around 2 to 2-1/2 yards. The largest portion was for the 50-foot tower that will house the TH-6 that I acquired last year from a Silent Key (SK) estate sale.

The remaining portion was for the smaller 25-foot tower that will be home for my SolarCon A-99, my out-board weather instruments, and my 2-meter antenna.

Rather than create a rebar cage for the 50 foot tower from scratch I purchased this base cage from DX Engineering. Not cheap but it was easier than making the cage myself.



There were a couple of troubling areas (to me at least) in the hole for my larger base. Some of the dirt/stone wall collapsed near the top of the hole. When I put up my wood forms it looked like I would have concrete leaking out of the gaps that were created by those spots.



So, I needed to consult with someone about this, as I wasn't sure if this is a major problem or minor inconvenience. I got on the phone with Joe Pugliano AJ30. I sent him some pictures, but he preferred to come look at the hole. After looking it over, Joe felt that it should not be a problem and that with a little effort, the pour should go well.

Joe asked me what strength of concrete I would be using. Whoa, that's a question I had no idea that needed an answer. He advised that I get 4000-psi strength. The reasons for that were: it would cure in about 2 weeks rather than a month, it would last longer, and it would be more resilient over time.

Joe also showed me how to set the lower tower section into the form so that it will remain level and stable during the pour. This is why it is good to belong to a club like ours. The understanding and ability to explain procedures and concepts to people like me are invaluable.

I then set up the rest of my form. Notice in the pictures that being plumb and level is important and that would be difficult to maintain without the proper bracing.



This is especially critical when having a pumper truck delivering concrete under pressure. It is possible to dislodge the base by the power of the pour. Each of the upright portions of the base were screwed into a 2x4 to hold the base in its position. The 2x4s were then nailed to the form walls.



I ran two plumb bobs to make sure the cage would fit properly by the garage. I also made sure my angle of attack would allow the tower to be lowered through the open gate onto the backyard.



Joe had also advised that there is a possibility that when the concrete is poured fast that it can lift the form up from the hole. (He mentioned something about "experience" in that.) To prevent that from happening, he advised me to run a perpendicular board across the top to keep everything in its proper place height-wise.



After my form was all finished, I received the Paisano Seal of Approval.



After the final phase of setting up the main tower form for the pour was finished, I went on to other work that needed to be done. The second tower needed to have a base prepared. It only needed a 3 feet by 2 feet hole, and it has a solid steel base, making it easier to prepare.

Once that hole was dug and that form was put in place, I just needed to have cement poured in and then put the steel base over it and insert the anchor bolts through the holes in the base into the soft cement. This assured that the posts would be in the perfect position.

I called the concrete supply folks to finalize my order for 4000-psi concrete. I was advised that this isn't going to be an inexpensive operation. The minimum order is 2 yards. I was OK there. But the concrete pumper would be more expensive than the concrete. YIKES!!!! Oh well, it's only money, right??? Errr... maybe not, but I started this, so I must finish it. I ended up ordering 3 yards considering that I had two holes to fill.

### Finally it was concrete pouring time.

Joe had mentioned that I should ask the person aiming the pumper tube to send the concrete to the center-bottom of the base and let the concrete ooze out toward the outer portions of the hole. I was lucky that the crew I had did just that before I had a moment to mention it.



It went perfectly. Nothing moved and when I checked for level and plumb the base was right where it started.



After the cement was poured it was time to strip some of the upper bracing off and skim the surface with a trowel to smooth it out and to put on a rounded edge to the block.

However, I had too much concrete. So, whenever that became obvious, I quickly threw together a form at my storage shed entrance to create a ramp that was sorely needed. A bit of a hassle to get that ready quickly, but at least I didn't waste any concrete.



Cement needs time to cure. For the first week, I needed to cover the cement with a damp covering to help slow the drying of the top layer before the inside portion of the cement does. A daily dose of misting water was enough to do the trick. Boy that cement got warm too!



Next I moved on to refurbishing the tower sections I have. I needed to wire brush the old paint off as much as could be done. Then I painted them with a brown Rustoleum rust primer. Then with an exterior coat.

Next steps will be assembling the tower sections and somehow, raising it without killing someone. Most importantly, getting it done before the weather closes in.

More on that, in the next article.

73, Rich/WQ3Q (aka Quack Quack)



**What we all want !!!**

## Goodbye Universal Radio



← back

### Notice

Dear Friends Of Universal Radio,

Time waits for no one, and that includes Barbara and myself. We have decided to retire and our current location in Worthington will close on November 30, 2020. Even though the store is closing we will fulfill all existing customer orders and have a large amount of inventory to close-out. The Universal Radio website will be maintained for the foreseeable future to sell this remaining stock, publications and some select products. Unfortunately the lack of a store front showroom will preclude us from carrying some manufacturers' products.

I am very fortunate to have been in the radio business for over 50 years, 13 at Radio Shack and 37 at Universal Radio. We have met many wonderful people along the journey who have supported me personally as well as Universal Radio. It has been a privilege to have a continuous career in the fascinating field of radio since 1969.

Please accept our sincere "Thank You" for your support of Universal Radio for these many years, and for the months to come.

Our new address for correspondence and mail order is below. This is not a store front.

Universal Radio Inc.  
752 N. State St. Unit 222  
Westerville, OH 43082

Phone: 614 866-4267

Thank you.

73,

Fred Osterman N8EKU  
Barbara Osterman KC8VWI

[Download as PDF](#)

[Universal Radio, Inc.](#)

## An Interesting Device at a Very Interesting Price

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### Welcome to the tinySA<sup>tm</sup> wiki!

The tinySA is a small spectrum analyzer, primarily intended for 0.1MHz to 350MHz input but it has some nice other capabilities:

- Spectrum Analyzer with two inputs, high quality MF/HF/VHF input for 0.1MHz-350MHz, lesser quality UHF input for 240MHz-960MHz.
- Switchable resolution bandpass filters for both ranges between 2.6kHz and 640kHz
- Color display showing 290 scan points covering up to the full low or high frequency range.
- Input Step attenuator from 0dB to 31dB for the MF/HF/VHF input.
- When not used as Spectrum Analyzer it can be used as Signal Generator, MF/HF/VHF sinus output between 0.1MHz-350MHz, UHF square wave output between 240MHz-960MHz.
- A built-in calibration signal generator that is used for automatic self test and low input calibration.
- Connected to a PC via USB it becomes a PC controlled Spectrum Analyzer
- Rechargeable battery allowing a minimum of at least 2 hours portable use
- Due to the low cost and very small form factor there are certain relevant [limitations](#).



### Introduction and other videos

A short 7 minute video introducing the main features of the tinySA can be found [here](#). More videos in my [YouTube channel](#)

There are a number of video reviews of the tinySA by IMSAY Guy on [YouTube](#). If you go there, make sure you also watch the later videos as IMSAY Guy was still learning how to use the tinySA in his first videos

## Welcome New Members !!

Welcome the following Skyview Radio Society Members who have joined us since publishing the October 2020 newsletter:

**KC3QIR - Mark Lewis - Cranberry Twp**

**KE3PO - Doc Sam Sarraf - Greensburg**

**K2PMD - Paul Dordal - Penn Hills**

and

**K3LR - Tim Duffy - West Middlesex**

**New Members joining in the last Quarter of 2020 are paid up throughout 2021**

Remember that something is going on up at 'the joint' every Tuesday. Sign up for the K3MJW Groups.io Reflector to get the latest news and event announcements by email.

If you are a reader who is interested in becoming a Skyview member, then go to:

<http://www.skyviewradio.net/> for information.

If you are a reader who is not yet a ham, and you are interested in becoming a ham, , then go to:

<http://www.skyviewradio.net/> for information.

## Skyview Radio Society Roster as of 30NOV20

NM3A	WA3HGW	KC3LVC	NJ3R
WB3ACC	KA3HPC	KC3LZH	KB3RBV
AD3AD	KA3HPM	N2MA	K3RMB
W3ANX	KB3HXP	KC3MBM	W3RRK
KB3APD	AG3I	KC3MIQ	I2RTF
KC3AY	KC2I	K3MJ	KA3RXY
NA0B	KC3IIO	KC3MNN	KQ3S
N3BPB (SK	WA3IKQ	KC3MNO	KD4SBJ
W3BUW	W3IU	K3MRN	KB3SOU
KF3C	K3JAS	N3MRU	K3STL
KC3CBQ	KC3JBS	KG4MSB	KB3SVJ
W3CDW	KB3JGG	KS3N	N3TIN
K3CLT	N3JLR	G4NFS	N3TIR
K3DCG	KA3JOU	KB3NSH	W3TLN
KC3DIA	N3JPB	KC3NYN	N3TTE
KC4EGG	ND9JR	AJ3O	AG3U
KC2EGL	KC3JSF	WC3O	NS3U
KC3EJC	KB3JXG	KC3OCA	N3UIW
AB3ER	KC3JXO	KC3OCB	W3UY
KC3EVT	K3JZD	KC3OCC	K3VRU
KB3EYY	KC3KEI	K3OGN	W3VYK
WB3FAE	WA3KFS	N3OIF	N3WAV
KC3FEI	KB3KHR	KB3OMB	K3WM
K3FH	AC0KK	KB3ORO	N3WMC
K3FKI	N3KNB	KR3P	W3WTJ
KC3FWD	W4KV	NK3P	K3WWP
N2GBR	KC3KXG	K3PC	KZ3Y
KC3GIL	KC3KXZ	KC3PEM	KG5YFN
KC3GIN	WA3LCY	K2PMD	N3YJN
KC3GPM	KC3LHW	KE3PO	KB3YJQ
K3GT	K0LIN	W3PRL	W3YNI
AB3GY	KG4LLQ	KC3PXQ	W3YNX
KC3GZW	KC3LNG	AE8Q	WA3YWU
NC3H	K3LR	NU3Q	K3ZAU
WD3HAY	KC3LRT	WQ3Q	
KB3HGJ	AB3LS	KC3QIR	

Notes: Only Call Signs are being published. Refer to QRZ.COM for more information. (Unable to publish those without Call Signs.)



## Kul - Links

Jody - K3JZD

There is lots of stuff out on the Internet... Some of it can brighten your day. Some of it can educate you.

I can't really copy and past it all in here. But, I can point you at some of it . . . .

Want to learn more about Solar Cycles and why those who have been hams for 10 years or longer are getting all excited about the arrival of Solar Cycle 25? Then read this:

<https://phys.org/news/2020-10-solar-sun.html>

Here is an article that discusses OpenStreetMap  
Those of you who contribute to OSM may find this to be interesting

<https://tinyurl.com/y3sg4vas>

I'll consider any Kul - Links that you find.  
Email then to me at: K3JZD AT ARRL DOT NET  
They might just end up in the next issue

## Previous Issues

Previous Issues of the Q5er are available at

<http://www.nelis.net>

Next Newsletter will be **February 1, 2021**  
Closing Date For Submissions : **Jan 15, 2021**

**K3JZD AT ARRL DOT NET**

## Become Well Known Publish in the Q5er

**The Q5er goes to other clubs and is  
available to all on our web site.**

**Submissions to : K3JZD AT ARRL DOT NET**

## >>>>> WARNING <<<<<

An Alarm System has been installed up at the joint. Do Not go in there on your own until you learn how to disarm and rearm it.

## \*\*\*\* Skyview VE Testing \*\*\*\*

**For Testing Dates, See :**

<http://www.arrl.org/find-an-amateur-radio-license-exam-session>

**Time:** Usually 8:15 AM

**Location:** Skyview Clubhouse Meeting Room  
2335 Turkey Ridge Rd  
New Kensington PA 15068-1936

**Contact:** William C. Dillen  
(724) 882-9612

**Email:** [bdillen@comcast.net](mailto:bdillen@comcast.net)

**Please E-Mail or call to register!!!**

While walk-ins are accepted, the exam session may be cancelled if no candidates are scheduled.

## Q5er – The Official Newsletter of the Skyview Radio Society



Q5er Editor & Publisher: Jody Nelis - K3JZD

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email your comments and article submissions to: **K3JZD AT ARRL DOT NET**



That's Easy . . .

Come up to the Skyview Clubhouse on any Tuesday and ask !!!

All General Information about the Skyview Radio Society is at <http://www.skyviewradio.net>

Subscribe to K3MJW **groups.io** reflector for All Current News & Activities : <https://groups.io/g/K3MJW>

If you want to keep up with what is going on NOW, that is the place - have it forward msgs to your email



Is this how your dining room looks ??

Where are the pictures of your shack ??