



Bulletin



February 2019

From the Pres



Dick K5TF

Mike Greenway K4PI will present an exciting updated program "DXing on 6 Meters" at our February 21st meeting 7:30PM in the Rich Auditorium at Piedmont Hospital. Mike will show how to take advantage of multiple propagation and transmission modes and on-line resources to effectively work DX year-round on the Magic Band. In addition, a 4-element Telrex 6 meter yagi will be included in the raffle!

Be a part of this exciting evening, and bring a friend or two. Come early and enjoy excellent, and inexpensive, food and DX-tales with club members at the Piedmont Hospital Dining Room prior to the meeting. See you there.

73 es gud DX,
Dick K5TF

This Month's Meeting

Date/Time: Thursday January 21st @ 7:30 PM

Location: Rich Auditorium, Piedmont Hospital

Details at www.sedxc.org



Program Title: **DXing on 6 Meters**
Speaker: **Mike K4PI**

Working DX on 6 Meters. This program was generated for the W4DXCC Convention several years ago and has only been shown once there at the convention. It is a Power Point presentation. I have talked about 6m DX before at the club, but I believe this is a new presentation. 6M DXing is not for everyone, but if you have some interest I think I can answer some questions.

73,

Mike K4PI

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2ND AFRICAN TOUR
BY MEK SP7VC

13.02-25.02.2019

A2 - Botswana
ZS - RPA
Z2 - Zimbabwe
9J2 - Zambia

Treasurer's Journal

Checkbook Balance as of January 1, 2019: \$11,873.
Check issued: CQ WW 160M Contest Plaque = \$55

73,

Jeff K1ZN❖

Announcements

None at this time.

A Farewell to Erik SMØAGD – DXPEDITIONER.

*Submitted by Dale Nordin K4HGG. Translated from an
article in the October 2018 QTC (Swedish = QST)*

On Friday the 10th. of August 2018, a group consisting of a large number of relatives and friends of Erik Arild Sjölund, SMØAGD gathered together to bid him a fond farewell. For a little more than an hour we heard songs, music and beautiful words at Värmdö Church describing a man that gave amateur radio operators so much happiness through his numerous DXpeditions to all corners of the earth. Eight fellow Radio Amateurs attended the ceremony where we represented the thousands of the "hams" that, via Erik, received a new country and added a valuable QSL to his/her collection.

At the following luncheon, eulogy after eulogy was given emphasizing the importance that Amateur Radio had in Erik's life, and many anecdotes from his life were given. Erik's faithful companion, Eva SMØOTG, made a loving description of his importance and meaning for the family. The picture that all of us had of Erik has been positive and confirmed as that of a likeable person, and the memory of SMØAGD will always be bright.

*The space left blank waiting for Your Story!
--Editor*

SEDXC OFFICERS

President: Dick Baxter, K5TF
K5tf58@gmail.com

Vice President: TBD

Secretary: Paul Kelley, W4KLY
w4kly@bellsouth.net

Treasurer: Jeffrey Cantor, K1ZN
jacantor9@Gmail.com

Activities: Norm Schklar, WA4ZXV
Wa4zxv@arrl.net

Appointed Positions

SEDXC Bulletin Editor: Clark Macaulay, WU4B
clark.macaulay@gmail.com

Membership Committee Chairman
Bill Barr, N4NX
n4nx@arrl.net

Webmaster: Chaz cone, W4GKF
w4gkf@chazcone.com

Club Communications

SEDXC Webpage: www.sedxc.org

SEDXC Chat Room: details on webpage

SEDXC Reflector: details on webpage

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Around the Shack de N4GG/4



Mystery UHF Connectors

“You get what you pay for” is certainly true when it comes to UHF connectors, including PL-259s, SO-239s, UG inserts, barrels, etc. Every hamfest seems to have at least one vendor selling “mystery” UHF connectors. Often these are found in the flea market, but they are sometimes sold inside by reputable vendors. Mystery PL-259s cost as little as \$1.

What are you buying when you spend \$1 for a PL-259? Nobody knows. Even the seller in the flea market doesn't know – he just knows its “great stuff.” Without a doubt it's not.

PL-259s are simple enough, right? What could go wrong? A lot can go wrong. PL-259s have four parts: The outer sleeve called the “knurled nut,” the connector body, the insulator/dielectric and the center pin. All four components can be compromised to the point of making a bargain connector useless.

Here are frequently encountered problems:

Finish – Bargain connectors sometimes have a finish you can't solder to. The non-solderable ones often have a chrome-like appearance, but some that look good are in fact impossible to solder to.

Threading – The internal threads at the tail of a PL-259 are there to accept a UG-style insert, used to narrow the connector barrel to accept smaller-diameter coax such as RG-8X or RG-59. The threads on a PL-259 and/or a UG insert may be metric! Some bargain PL-259s will not accept an English thread (the US standard) UG insert. The knurled nut may also be metric.

Dielectric – Good connectors use quality phenolic or Teflon insulation between the center pin and the body. Bargain connectors might use anything, including materials like polystyrene, which will melt when the center pin is soldered.

Around the Shack (cont.)

Center pin diameter: This is one of the most common and insidious problems in mystery PL-259s. The center pin OD is often slightly smaller than it should be, and it's hard to notice. The center pin connection between a PL-259 and an SO-239 or barrel connector depends on correct diameters of the pin on the male plug and the mating fingers on the female socket. The fingers on the SO-239 socket must be made of the proper spring material (beryllium copper).

In addition to mystery SO-239s in which the center pin spring tension relaxes over time and/or temperature, the annulus flange that mates to a PL-259 may only have four indentations ("Four cuts" or "Four V" in connector lingo) to match up with the nipples on the body of the male connector. The SO-239 and barrel connectors I prefer have indentations all the way around the circumference ("Sixteen cuts" or "Sixteen V"). It is nearly impossible to mis-mate a quality PL-259 to a sixteen cut SO-239 or barrel connector.

With poor quality components, PL-259-to-SO-239 connections can become intermittent over time. They also become temperature sensitive when used outdoors. At N4GG I have had to replace several mystery PL-259s in the back yard that would be fine most of the time, and an open circuit on a cold day. I have had A LOT of intermittent linear amplifiers on the repair bench at N4GG. One particular amp manufacturer uses dismal quality SO-239s for the RF input and output connections and the spring tension is so bad – even when brand new – that they simply have to be replaced. You can tell bad ones quickly – slide a PL-259 into an SO-239. It should fit snugly. If it doesn't, one side or both sides are most likely junk.

As bad as mystery PL-259 and SO-239 connectors can be, there is something worse. The really bad actors are Tee and right-angle (elbow) UHF adapters. Take a close look at what has to happen inside these adapters. The center conductor has to make a right angle turn inside the shell. How do they do that? In poor adapters the right angle connection is done with a spring contact, and these do not hold up – particularly at QRO power. Quality Tee and right angle adapters have internal conductors that are tapped and threaded. The male side center conductor is screwed into the female side(s) within the body at the right angle junction. Adapters made this way are very reliable.

How can we tell the good connectors from the junk? Price for one. If the price is too good to be true, it probably is. Finish is another tip-off. PL-259s with good silver plating have a dull appearance. Last but not least is the fact that all mystery UHF connectors have one thing in common: Mystery! Good connectors have a part number and the manufacturer's name stamped onto them. You can look up the connector's specifications if it's marked. Examples of this are connectors made by Amphenol, all of which have part numbers stamped onto or into the connector body. Old-timers are fond of saying: "Amphenol or not at all," although there are now other suppliers offering quality connectors. For the difference of a dollar or two, "mystery" UHF connectors are a very poor investment.



Figure 1.

An Amphenol PL-259 in an Amphenol bag.
The bag and connector are both marked. You can't go wrong here.

Note: The above is paraphrased from an article I wrote for the March/April 2017 issue of NCJ magazine, and some of the material appears in the 20th edition of the ARRL Handbook. It is used here with permission of ARRL. Sadly, there has been a new development since I wrote this in 2017.

My advice in 2017 was to look for PL-259s, SO-239s, etc. that are marked. "Amphenol or not at all" has always been a safe bet and all of their connectors are marked. They are worth an extra dollar or two. Some Amphenol PL-259s come in a sealed bag filled with dry nitrogen. NOS (new-old-stock) Amphenol connectors in sealed bags can still be found with a little looking. Ones from the 1960s and 1970s are as-new as they come out of the bag.



Figure 2.

Examples of Amphenol PL-259 connectors. The left one is marked in ink, the center and right one have their markings stamped into the body. All carry both the name of the manufacturer and a part number. The inked PL-259 is an authentic Amphenol.



Figure 3.

An Amphenol and an unmarked PL-259. The unmarked part was bought from MAX-GAIN and is known to be an excellent product.



Figure 4.

An Amphenol UG insert. Note, the part number is stamped into the part and the finish is dull – it's silver plated, top quality.

The bad news: Beginning in 2017 a new offering of rogue UHF connectors appeared at the Dayton hamfest - ones made in China and MARKED Amphenol. They ARE NOT Amphenol and they fall squarely in the junk category.

How to identify a phony "Amphenol" PL-259:

- 1 - With a wet finger you can rub the marking off. I guess junk connectors deserve junk ink!
- 2 - The center pin on an authentic Amphenol PL-259 is molded into the center insulator. Look inside one of the phonies and you will see the inside-the-barrel end of the center pin is square, and obviously crimped to the center insulator. You can sometimes twist the center pin with your fingers.
- 3 - The price is too low.



Figure 5.

SO-239s. The one on the left is an old Amphenol that is clearly marked. The marks include the manufacturer, the type and the part number – there is zero mystery about what this is. The one on the right is a “mystery” connector. The old Amphenol fits tightly with a PL-259 and is perfectly serviceable. The nice shiny brand new one on the right is junk – a PL-259 slips into it so easily the connection is intermittent.

In the original article I also mentioned there are some perfectly good UHF connectors that are not branded, but, also, not mysterious. Two sources for excellent UHF connectors that are manufactured specifically for the houses that sell them are:

- "MAX-GAIN Systems", Marietta, GA, WWW.MGS4U.COM. Known for fiberglass poles and push-up masts, MAX-GAIN also sells a variety of UHF and other connectors. MAX-GAIN's PL-259s are silver plated brass with a high quality Teflon center insulator - that's as good as it gets.

- "The RF Connection," Gaithersburg, MD, WWW.THERFC.COM. In addition to their in-house UHF connectors, which are excellent, they carry Amphenol connectors and have a good stock of NOS Amphenol as well.

Both vendors' connectors are manufactured for them, to high-quality specifications. You can call either company and the principals can tell you everything there is to know - dielectric type, center pin ID and OD, plating, etc. There is no mystery involved!

One additional note: Given a choice, I avoid gold-plated UHF connectors. Gold does not tarnish and maintains its solderability forever, but gold-plating is often found on mystery connectors and silver is a better conductor than gold.

It's the seemingly mundane parts '*Around the shack*' that cause a lot of problems!

73,

Hal N4GG/4❖

DXpedition Funding Requests
None at this time--Editor