

2016 PDF edition

Old Familiar Strains

A newsletter for Collectors of Radio Strain Insulators and related items
Volume 2 No. 1

February 1995

CATALOGING RADIO ANTENNA INSULATORS: Part I

by Dan Howard

Many of us share the experience of accumulating radio antenna insulators in a "vacuum" with little, if any, interaction with other collectors. As insulators were found, we were on our own to come up with ways to describe and keep track of them. As we collected, each of us developed his or her own terms for the different shapes, colors, and types of materials. Doesn't this sound a little like the Tower of Babel?

If we are to forge bonds with other collectors and flourish as a collecting community, a common set of terms must be developed. It would be nice to have, but I am not aware of, an authoritative text which offers guidelines in these areas. Therefore, developing a set of collecting standards is one of the most essential tasks before us.

This article, ominously subtitled "Part I", marks a first step toward providing that missing "common point of reference" for our hobby. Taking this process a step-at-a-time allows the option of stepping back and trying a different route, if necessary. And, it provides a dynamic environment for feedback along the way.

In the long run, I expect that this series of articles, or others in parallel, will cover the types of antenna insulators, the materials that they are made of, provide a set of standard shapes by which insulators can be cataloged, and finally offer an integrated cataloging system. Your suggestions and expertise in any of these areas will be appreciated.

It is hoped that these articles will help you enjoy antenna insulators as collectibles. If you would like to put the little gems to work, I recommend texts such as the American Radio Relay League's Antenna Book.

Part I: What We Collect

Introduction

On my trip to southern California last Spring, we stopped at a few antique shops along Interstate 5. Always the optimist, I answered honestly when the proprietor of one shop
(continued on page 3)

Editorial

by Dan Howard

obligatory donation solicitation section

My thanks go out to those of you that remembered to send in donations for 1995. Of the 30+ that remain on the mailing list, almost half have sent in \$10.00 donations for 1995. As such, we are starting the year healthy financially. I would appreciate hearing from the others in the group. If you have a continuing interest but feel that the magazine could better meet your needs in some way, please send in your ideas with your 1995 donation. If your interests have changed, please let me know so that we can conserve our resources.

corrections from the last issue

As reported in the last issue, Bob Puttre is compiling a list of lightning arrestor manufacturers. I expect that including his address in the magazine would probably have helped you get in touch with him! Bob's address is included with the roster this time. Sorry!

The antenna cleaner illustration on the back cover of the last issue originally appeared on page 1202 of the January, 1928, issue of "Radio News" magazine.

Publicity

Announcements about our newsletter have appeared in "Antique Radio Classifieds," "Radio Age," and "The Call Letter" magazines. If you have free or low-cost advertising privileges in an appropriate periodical, we would appreciate the publicity.

What we collect, continued from page 1

asked "What are you looking for?" After repeating myself slowly several times, I think that he finally began to understand that I was looking for "those funny glass jobbies that folks used to use to hold up radio antennas out on the farm." Then he related the often-told tale of the "bucket full" that he threw out because "nobody wants them." Fine. Fine. More for me.

But, what do we collect? Even among our collecting peers, it is often difficult to describe what it is that we are "looking for." I include lightning arrestors in my collection as well as current-production insulators. However, I have corresponded with several of you that limit your collections to just one type of material, such as glass.

The first installment in the series is intended to provide a basic grounding in the various types of antenna insulators. While I intend to emphasize antenna end insulators (see definition below) in future articles, I believe that the corollary collectibles or "go-withs" are of interest as well and deserve coverage.

A Basic Set of Definitions

As in other applications, insulators are used in radio for the simple purpose of providing electrical separation between conductors. Radio antennas and the "lead in" or "feed" wires that connect them to the radio typically need to be insulated at several points. Special insulators have been developed for each application.

Feed Line Insulators

This section will cover insulators that are used along the lead-in or feed line wires that connect the radio to the antenna.

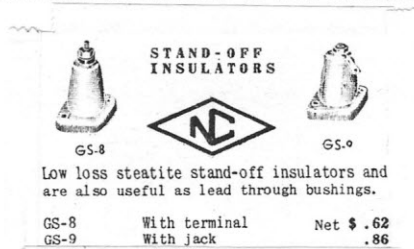


figure 1



figure 2



figure 3

Stand off insulators

Beginning at the radio, the antenna lead in wire may run across a table or may snake along a ceiling or wall. When an antenna is used only for receiving, the plastic, cotton, or varnish insulation on the lead in wire is usually all that is necessary to insulate it indoors. At times, insulated staples are used to support the weight of the wire or to keep it out of the way.

Outdoors, and in transmitting applications, feed lines are often supported by **stand off insulators**. Figure 1 shows a type of porcelain stand off insulator.

Typically, one end of a stand off insulator provides a mechanism for mounting to a wall. The other end, offers a means by which the feed line can be attached. Thus, stand off insulators provide essentially the same function as telephone and telegraph pin insulators. Nail-on or screw-on house wiring cleats have also been used for stand off insulators (see Figure 2). Today, stand off insulators are most often seen holding television lead in wires on the sides of houses (see Figure 3).

Wentzel, Rich 8 Oakdale Dr, Millville NJ 08332 (609) 327-4717
Wildnauer, Mike 109 Pine Crest Rd, St Marys PA 15857 (814) 834-1940

Classified Ads

For Sale:

L.S. Brach Type 300 Non-Air gap Lightning Arrestor. Brown Bakelite. New old stock. Four available, three with OK (not mint) boxes. Best boxes going to earliest orders. \$6.00 each post paid. Dan Howard.

Lots of antenna insulators. Jim Overstreet.

Antenna Insulators, sell or trade for other strains or advertising and patent information on strains. Glenn Ross.

Wanted:

Complete antenna kits in original boxes; Philco, Emerson, Sears, etc. Dick Mackiewicz.

Early Composition or hard rubber insulators. Catalogs or ads for insulators and lightning arrestors (clear copies OK). Dan Howard.

Information on Corning Glass (Pyrex) insulators. Jim Overstreet.

Scarce colored glass radio pieces to add to my collection. Please write or call collect. Keith Roloson.

Why not write us a letter and include your ads? Please see page two for advertising policy.

Feed Through Insulators

Where an antenna lead in wire passes through a wall, a **feed through insulator** is used. There are two basic types of feed throughs. As shown in Figure 4, the first type is a simple porcelain tube of the type that was used for "knob and tube" house wiring. The insulator is simply a conduit through which the lead in passes.

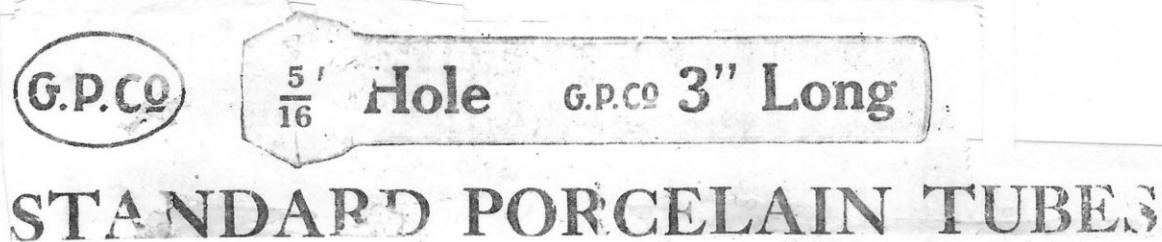


figure 4

The second type of feed through insulator has a built-in conductor. Such a unit is illustrated in Figure 5. The antenna lead in wire is fastened to the outside end of the feed through and the line to radio is fastened to the other.

M&M

ANTENNA
INSULATORS

for
Perfect Reception

Weather proof, storm proof, water proof. Reduces outside interference. Have removable brass rod permitting use of continuous antenna wire if desired.

4" lead-in window insulator for use in window sash. Price50c

10" lead-in wall insulator for use on window casing or house walls. Price80c

20" lead-in insulator for use with all heavy walls such as apartments, office buildings, etc. Price\$1.50

figure 5

Another type of feed through device consists of a metal ribbon with a binding post or Fahnestock clips on either end (see Figure 6). Such feed throughs were intended to be placed under double-hung windows and often are wrapped in the middle with varnished cloth insulation.



figure 6

Spreader Insulators

In certain applications, two-wire feed lines are used (such as the familiar "twin lead" that is used with your TV antenna). One of the functions of the shape of "twin lead" is to keep the two conductors a constant distance from one another to maintain the electrical characteristics of the feed line. A similar effect is achieved by using plain wires with **spacing** or **spreader insulators**. Three types of spreader

insulators are shown in Figure 7.

Transposition Insulators

Occasionally, when using a two-wire feed line, it is desirable to repeatedly transpose the position of the wires. The E F Johnson Company, made a **transposition insulator** for this purpose (and others probably did as well). Johnson's transposition insulators are made of white porcelain and look like small picture frames.

Antenna Insulators

Yes, we are finally going to talk about "real" antenna insulators. While some of you may have less interest in feed line insulators, I felt that defining the other types of insulators at this stage would facilitate future discussions.

Wire antennas can be divided into two families according to where the lead in wire attaches. The two families utilize two different types of antenna insulators.

End Insulators

The lead in wire attaches to the end of most "long wire" receiving antennas. Such antennas typically run from the peak of the house to a tree or other high point and are supported at the ends by **end insulators**.

End insulators (see Figure 8a & 8b) are what I typically think of as "antenna insulators" or "radio strains." (Should I clip this section out and send it to that antique dealer in Red Bluff??? Oh, maybe not). End insulators will be covered in depth in the next installment of this article.





<p style="text-align: center;">PORCELAIN INSULATOR</p>  <p>Glazed porcelain. Will not crack or absorb moisture. No. NK 920List \$0.15</p>	<p style="text-align: center;">STRAIN INSULATOR</p> <p>Glazed ceramic strain insulator featuring low moisture absorption and high dielectric strength. Particularly suitable for outdoor antenna installations; Length: 1 1/2"; Diam.: 1 1/8"; Wire Hole: 1/8" diam.; Distance between holes: 5/8". No. NTV 1775.....List \$0.20</p> 
---	---

figure 8(a & b)

Center Insulators

The feed line connects in the center of a two-part "dipole" antenna. In addition to being supported on the ends by end insulators, dipole antennas use **center insulators**.


FEEDER SPREADERS

Lucite, with clamps on end to hold 12 to 18 gauge wire.

Number	Length	Net
I-1900	2"	\$.27
I-1901	4	.32
I-1902	5	.34
I-1903	6	.39


BIRNBACH



High tensile strength smooth glaze porcelain.

Number	Length	Net
462	2"	\$.15
464	4	.21
469	6	.27

AMPHENOL



POLYSTYRENE
Light in weight, extremely low-loss, self-tapping screws hold the line rigid.

Number	Size	Net
66-205	2"	\$.09
66-206	4	.12
66-207	6	.15

figure 7

A center insulator insulates the two halves of a dipole from one another, and provides a point at which the feed line can attach. Additionally, some center insulators have a built-in balun. The Budwig HQ-1 center insulator was illustrated in the last issue.

Lightning Arrestors

Lightning arrestors provide a path for lightning to get to ground without (hopefully) following your antenna into the house, the radio, the dog, you, etc.. A typical arrestor is shown in Figure 9a & 9b.



figure 9(a & b)



Some insulator manufacturers also sold arrestors and made "antenna kits" which included end insulators, feed throughs, stand offs and wire.

Cataloging lightning arrestors rarely poses much of a challenge as most carry brand names and model numbers.

Conclusion

Future installments in this series will focus on antenna end insulators. Many of the topics will cross over, however. We will also cover strays such as "antenna springs" (and spring antennas, for that matter) in upcoming issues.

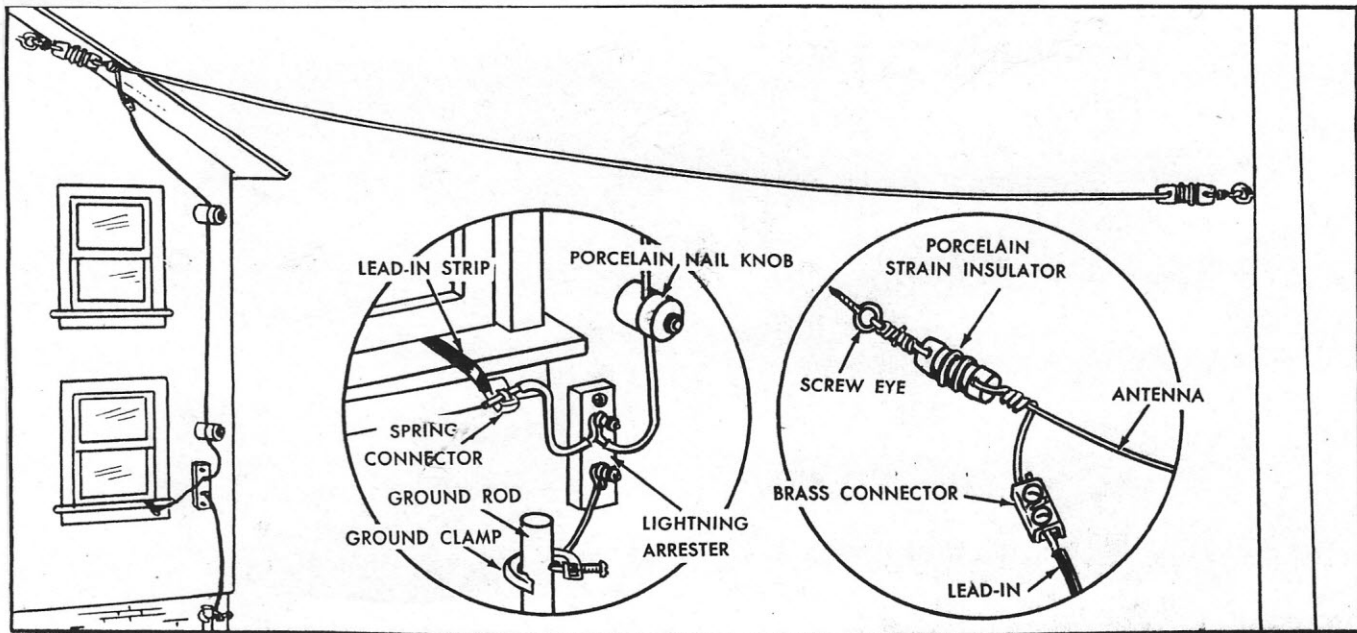
Be forewarned. Now that these terms have been defined, I am going to feel free to use this "jargon" in the future installments. Perhaps that will be incentive enough for you to save this newsletter and use something else to line the bird cage?

Finally, the illustration on the back cover is from a Wards Airline antenna kit (part no. 62-422) in my collection. It provides a quick reference for the parts that have been discussed and shows how they work together.

Sources:

American Radio Relay League The ARRL Antenna Book, 15th edition, Newington, CT, 1988.

Figures 1 & 7: Walter Ashe Catalogue, 1953. Figures 2, 6, 8a, 8b & 9a: Radio's Master Catalogue, 19th Edition. Figures 3 & 9b: The Master Catalogue, 22nd Edition. Figure 4: General Porcelain Co. advertisement, courtesy of Dick Mackiewicz. Figure 5: "Radio News," January 1925, pg. 1306.



**Old Familiar Strains
2016 PDF edition
scanned from originals
in the OFS archives.**