

ARRL

# Zero Beat

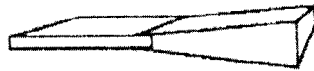
MONTHLY

Service Club

October 1996

The Alliance Amateur Radio Club POB 3344, Alliance Ohio 44601

Horn Antennas, and VHF/UHF Antenna Testing by AABGY



Pyramidal Horn

Common Horn antennas are: E-plane, H-plane, Pyramidal and Conical. The E-plane is narrow in the vertical dimension in the feed wave guide and flares vertically in the horn portion. The H-plane is thin in the feed wave guide as well but, flares in the horizontal portion of the horn.

The pyramidal is the most common horn type and the horn portion flares in both directions.

The pyramidal horn concentrates the beam in both the E and H planes. The most important use

is, of course, at ham VHF conferences as a standard gain antenna (or other amateur radio applications.) The antenna under test is connected to a diode detector. The diode detector is connected to a voltmeter with a square law detector scale. The source is AM modulated.

The difference in distance traveled by the wave (from source to aperture) changes the phase in differing amounts at points, on the aperture (compared to their corresponding source point) **END**

## Warren Hamfest -- antiques were available

Many of the Radio Club saw first hand the offerings on the 18 of August. Rusty chassis hulks and such were obtained for future projects. Just glad few people saw me load the stuff in such rough shape! But recycling should be recognized.

- \*Round Knight 40meter xtal \$7.
- \* Balentine AC Voltmeter \$5.
- \* 14 tube Philco SW rusty chasis \$7.
- \* Meisner rusty chasis w/3 tubes \$3.
- \* SW Rx rusty chasis w/7 tubes \$6.
- \* Trimm headphones \$1.

Proves I'll buy almost anything. **END**

5. The Amateur is Balanced. Some are -- some just enjoy life

## Meeting Announcement

Our next meeting will be held on October 3rd at the Alliance Community Hospital at 7:30 pm in the back of the Cafeteria.

### K8OMO still Sparky

AA8GY's employer provided some last minute tickets to an Indians game in August. As Bonnie, my kid, was ill K8OMO very graciously agreed to attend the game. Riding in the hot car -- well you can't keep me off radio -- Don described a couple of new keys he recently obtained. Don said a guy brought him a couple of spark keys from a Destroyer to a recent hamfest. Radio hound that I am I had to see the unsold key.

This spark key is one real beauty but your desk will have to have some holes in it to use this key. There are to solid conductors that extend downward to handle some serious current. The contacts are something like half the diameter of a penny and the keying lever is hefty.

The other key is one of those tiny keys. This one is not delicate like some but sturdy and very attractive.

So you may just have to buy a K8OMO key tape if you want to see these puppies. These two, well, your talking nice keys.

Now the Indians they lost that night. Jacobs field was nice and Thome was relaxed and just across from where we were sitting. END

"Necessity is the mother of taking chances" -- MARK TWAIN

### The Spark Transmitter

The spark transmitter consists of roughly the following:

1. Motor Generator.
  2. Motor start circuit.
  3. Field rheostats -- control frequency and voltage.
  4. Step up transformer.
  5. Ammeter.
  6. Voltmeter.
  7. Wattmeter on transformer input.
  8. Regulator on transformer
  9. Telegraph Key.
  10. Condensers.
  11. Spark Gap.
  12. Oscillation transformer -- connects spark circuit to antenna.
  13. Antenna ammeter.
  14. series capacitor in antenna circuit "short wave condensor".
  15. Antenna inductor -- lowers resonant frequency.
  16. Antenna switch.
  17. Antenna -- "Aerial".
- Abstracted from " Practical Wireless Telegraphy" by Elmer E. Bucher 1917 employed by Marconi Wireless Telegraph Company.

### Old Radio Speaks Again

The rusty chassis I paid \$6 for a Grunor 10 tube 3 band receiver is again a useful object. This is the story of how I brought it back to working condition. First the type 80 rectifier was pulled, then a power cord soldered onto where the old one had been. Checked secondary of transformer for high voltage. To limit voltage and current so electrolytics could reform soldered a 100 watt light bulb in series with primary of transformer. Turned unit on for a second while monitoring high voltage. Turned unit on and off several times for increasing amounts of time. Believe this step was necessary because of action of voltmeter. Removed the light bulb from primary and powered up radio. No explosions. Removed speaker from free radio from hamfest and installed. Used secondary of a power transformer to replace electromagnetic speaker winding. Powered up radio no click when touching grids with insulated screwdriver. Looked up old tube in '39 handbook found plate -- no voltage. Checked IF can and wirewound resistor with voltmeter, and ohmmeter. A 500 ohm wire wound was open in plate circuit to many tubes. Replaced with two series 300 ohm resistors much lower wattage, (but still there). Powered up can now tune one AM station -- big smile. Flip band switch several times to clean. listen to am station. Contd. Old Radio next page.

### Old Radio Lives Contd.

So now I see smoke. The small screen resistor of dumbbell shape is cooking. Look in handbook screen resistor values typically 100k to 10k. since it is red I guess 20k and put in two series 10Ks. Works but still low volume on all bands. Tweak antenna trimmer -- helps. Flip band switch again -- Boom! speaker blows my ears out! Turn down volume! Try shortwave 1 and 2. Have to tweak trimmers but they work now! Listen to Cuban, French, and Spanish language broadcasts, -- music everywhere. Welcome to SW broadcasting! A 0.1 uF paper capacitor starts dripping wax! Replace with parallel 0.05 uF ceramic discs -- no problem. Listen to WCBS on AM describe hurricane approaching Cape Cod at 11:30 PM. Started about 7:30 PM -- but I've done a lot of listening. From the tube line up design is from late 30's. From label radio was made in Chicago.

So next day I pulled the transformer shell off and use wire brush to remove rust then paint shell as it was solid rust and looked bad. So I'll let radio bake a little and cure paint. Vonder if it'll ever get a cabinet?

Listening to WDPN "Maime", then "Volarie" 73 End.

### Pure Bad Fiction A short story ( ok ...so I needed filler...)

Jonathan's pulled a nylon fishing tote from the trunk of the rusting Chervette. The silver -blue car left Alliance at midnight and arrived at WVa. Tech at 10:20n or so. He located his doorm room and started to unload. He meets and befriends a lonely looking student also starting this fall semester. They eat hamburgers across from the school at a greasy spoon. He asks few questions but doubts little of what Jonathan says. Jonathan can't stop talking -- tells Terrence how stupid he is leaving his girlfriend behind. When the conversation dwindles he pulls a QST from the his pocket. Terrence asks about the magazine. Jonathan thinks his girl is one that will end up with a line of heads on the end of spears around her hut -- only wants a tall guy from an Ivy League school -- probably a journalism major with a head full of bullcrap. He realizes she doesn't have a motive, just an appetite for men. Always the shortest skirt and the center of attention. He takes a chance and tells Terrence what he's thinking. Terrence starts laughing. "What?" Jonathan asks, puzzled.

Terrence fetches more Cokes and tells him to relax that there are lots of girls up in Charleston. They leave and Jonathan unpacks the clothes from the plastic garbage bags he brought them in to school.

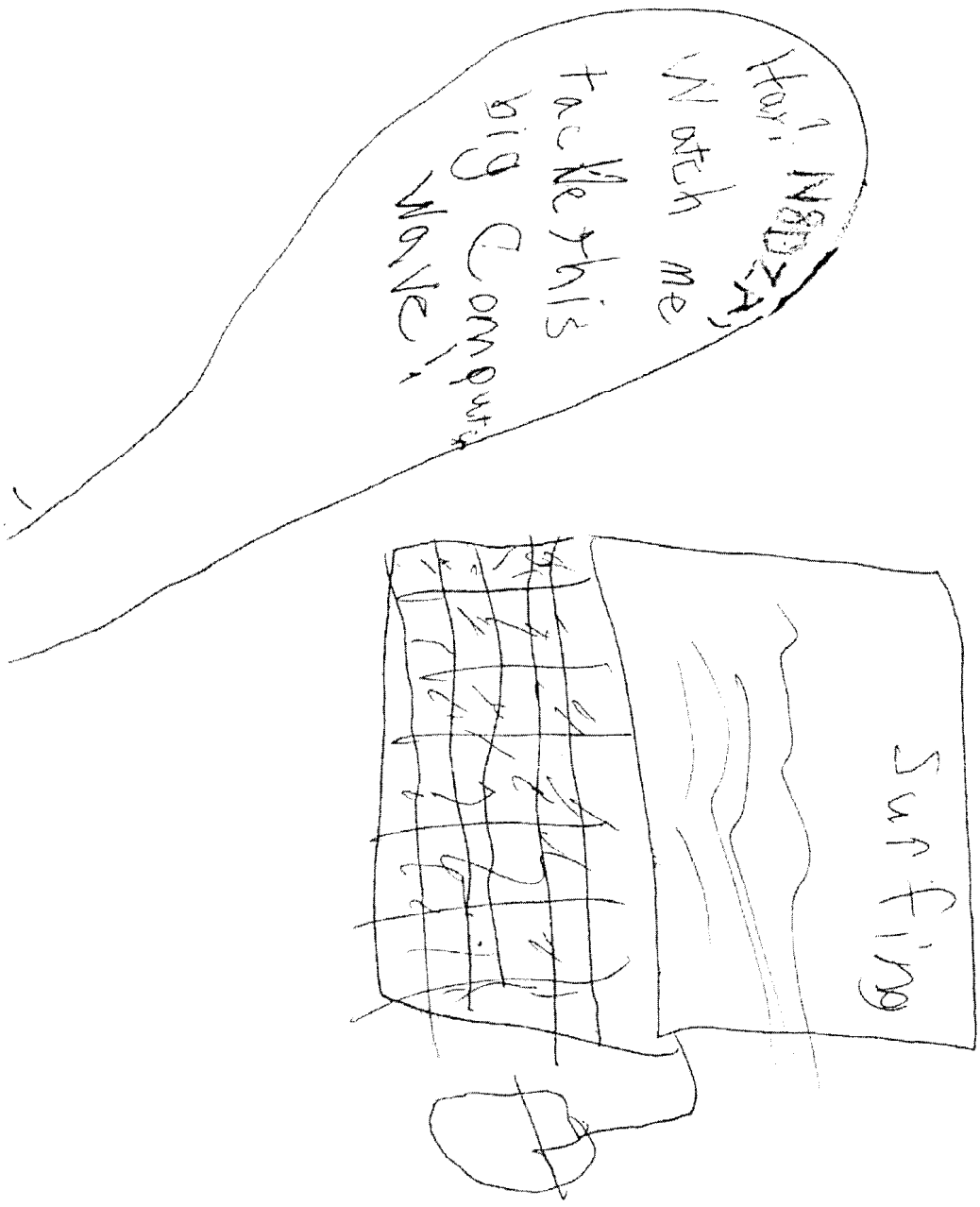
Jonathan unpacks the clothes and small stereo radio set he has brought with him and the few QSTs he has, -- puts them on the bookshelf. Takes off for an orientation speech by a provost, whatever that is, from the school.

Jonathan returns looks at the schedule and decides to tour the Campus. Visits the building housing the history program. Stops by the libray reads QST magazines from the thirties and fourties. His home library had them only back to the seventies. *Continued somewhere as "Radio Magic" -- if you can wait!*

*It is the greatest of all mistakes to do nothing because you can only do a little. Do what you can.*

*Sidney Smith*

To, Dad  
From, Bonnie



**ALLIANCE AMATEUR RADIO CLUB**

**September 5, 1996**

The regular meeting of the Alliance Amateur Radio Club was held at the Alliance Community Hospital on September 5, 1996, at 7:43 P. M., with Jerry Shore AA8GY, president, presiding. Secretary David Glass W8UKQ kept the minutes. There were 21 members and four guests present. The pledge of allegiance was given, and introductions were made.

The minutes of the last meeting as printed in the newsletter were approved on motion by Don K8OMO, seconded by Jim K8LTG.

Mary Ann KB8IVS reported the treasury balances. The report was approved upon motion by George KE4BNE, seconded by Larry KE8VE.

Old Business:

Christmas Party: Jerry AA8GY asked for the preference of the group for the place for the party. The majority favored Roadhouse Charly with no one or few in favor of other places offered. Jerry AA8GY will look into arrangements.

Corn Roast: Don K8OMO will check with Bob KB8GAG about having the picnic on September 14.

Classes: Larry KE8VE reported that a class will begin Tuesday, September 10, at 7 P. M., in Room B.

Red Cross: Don K8OMO stated that there have been some emergency drills with limited participation by amateurs. He suggested that if any of us observe anything the Red Cross should know about to call their office in order to let them know we are watching and available.

New Business:

Elections: Jerry AA8GY announced that elections will be held following the next meeting. Don K8OMO will be the nominating committee.

Appreciation was shown to Larry KE8VE and Dianna for their work in producing the newsletter.

Show and Tell: Don K8OMO displayed a 1903 spark gap key made by the Machinery Division of the Navy Yard in Boston.

Christmas Party: Jerry AA8GY proposed that nominations be presented to him for special awards for unusual situations in addition to the usual award. Jim N8MAA moved that the president be authorized to buy prizes for the Christmas Party. The motion was seconded by Jim K8LTG, and approved.

The 50-50 drawing was won by George KE4BNE.

The meeting adjourned at 8:30 P. M., upon motion by Jim N8XTJ, seconded by Bill W8ZZS.

Respectfully submitted, Dave Glass W8UKQ, Secretary

### More strange filler fiction - "Radio Magic"

Magic comes those who try he hopes. He wants so much, to learn so many skills. For Jonathan waiting for the magic is so painful that the desire becomes over overwhelming. The magic of being able to create something greater than the parts. He hungers to live beyond the mundane to live and create, to be more than a survivor..

Jonathans' mind drifted to his girlfriend something so special about her. Someone whose words seem to cut straight to the essence, precis, moving, alive Everyone needs a forum, a position shaman, engineer, salesman, a place, a role -- her's is life, energy. Letting go of her -- he knew it was coming -- easier to do by replacement. Just move. No one helps you understand girls. The knowledge is presented to you -- too slowly -- its up to you how you assemble information into your own paridim. Through no fault of his own he was loosing her. Her expectations not his omission or silence were the reason. Life is what you make of it to some degree. He had to develop his own energy now, save himself, his own place. How? By facing up to the awful, to get it over with, to get a grip and pull out of this wallowing in grief.

You're so lost.

Daydreams are probably a large part of lives -- more at times virtually none at others. One moment the Independence had been sailing along the next moment the super structure had exploded. Jonathan had been in the officers mess having lunch. The whole ship rolled. No one had said anything the first half second. Holy crap I say -- everyone looked at me, grabbed something and hit the doors running to the deck. Fire fighters were everywhere. I went back to my room. a few minutes later a knock at the door and a young guy said to get my things together. Ten seconds later another knock. The sailor at the door was one I had met in the mess and had had lunch with every day. He was a ham radio operator and we had become friends. What I want you to do, Jonathan, is help me get the HF station back on the air? The antennas are gone and these kids only know how to splice cables. "Fine but they told me to get ready to leave". "I'll take care of that". We worked on the deck, I had some steel cable and clamps for emergency antennas.

It took us 30 minutes to get a station together. It took another two hours to get the elevator working. Three minutes later the sky lit up.

I thought I was crazy. The things I remembered had to be a dream. I thought my arm was gone -- when the haze cleared a little I discovered my arm was heavily wrapped in gauze. I was bandaged everywhere. A male nurse was working nearby. When I moved the nurse looked my way "the captain wants you off the ship". "Fine". Two days later I was asked to get ready to leave. The message to leave never came. At 2:00 am a messenger told me that I wouldn't be leaving yet.

JONATHAN!

I was daydreaming -- the teacher cleared throat, bristled eyebrows, was asking me about our reading assignment. I decided then to become my own person not dependent on HER for life. I would build boats and radios and use them. I would feel life, drizzle in the face, good and bad. I was alive again. END (PLEASE SUBMIT ARTICLES!!!!)

**It's only those who do nothing that make no mistakes! I suppose. Joseph Conrad**

**You are invited to attend the AARC Christmas in January Party!**

*Where: Roadhouse Charlies 2239 West State Street Alliance Ohio*

*When: The second Saturday of January -- January 11, 1997*

*When: 7:00pm EST*

*Advance Registration is strongly recommended as they must be called in 3 days prior to party*

*Please register soon so you won't forget!*

*I had a great time last year and think everyone else who attended did us well*

**Banquet Menu**

**Strip Steak 8ounce \$13.50**

**Broiled Boston Scrod \$9.75**

**1/2 Slab BBQ Ribs \$9.75**

**1/2 Honey Glazed or BBQ Chicken 8.75**

**Baked Rigatoni \$7.95**

**We must pick three of these at next meeting**

*Prices include Taxes and Gratuity*

*You should pay when you register*

**Party Registration Form For your Convenience**

Meal Number 1: \_\_\_\_\_ Amount \_\_\_\_\_

Meal Number 2: \_\_\_\_\_ Amount \_\_\_\_\_

Meal Number 3: \_\_\_\_\_ Amount \_\_\_\_\_

**TOTAL** \_\_\_\_\_

**Please Mail To: Jerry Shore 880 Parkway Blvd. Alliance Ohio 44601**

**If enough people register I'll abscond with the funds to The Cayman Islands -- so register lots of people.**

**AA8GY email adress should you get inspired to write an article and desire to email the same:**

**J.SIIORE.AA8GY.WA4IOW@WORLDNET.ATT.NET**

**ARTICLES MAY BE SUBMITTED IN ALMOST ANY FORM**

**PLEASE DO NOT ENTER MATERIAL WRITTEN ON ANIMALS!**

AARC October 1996

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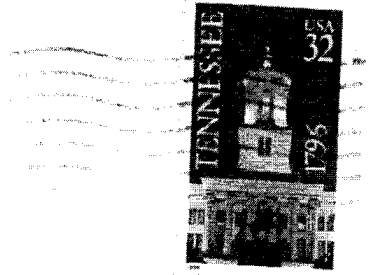
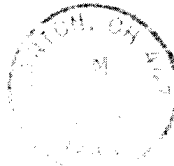
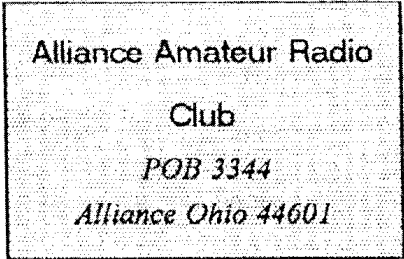
**Trusties Contd.**

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