

# The $\Omega$ <sup>Ohm</sup> Tahan News

VOICE OF THE BRIDGERLAND AMATEUR RADIO CLUB

LOGAN, UTAH

FEBRUARY 1993

Vol. III, Number 2

## SUPERPRESSURE BALLOON 3: *Balloons and Bayous!*

**Stan, N7UXC**

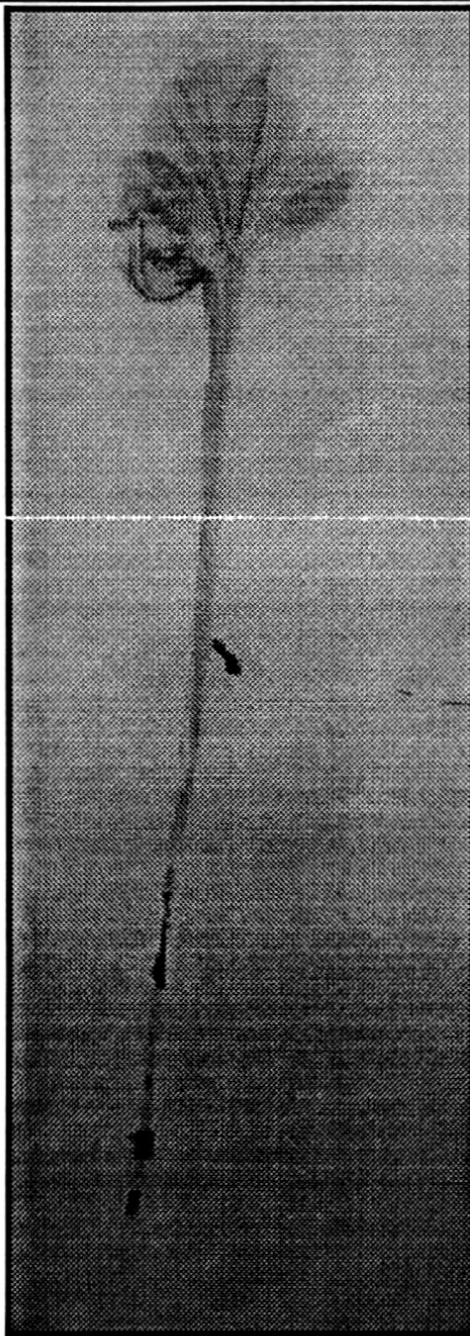
**Harl, W7LTH**

**Gil, N7YTK**

The successful flight of a super pressure balloon from Houston, Texas to Jacksonville, Florida at 110,000 feet was the goal for Gil, N7YTK, Harl, W7LTH and Stan, N7UXC when they set out for the Lone Star state to launch the 11th balloon sent up by members of the club. The flight was scheduled as part of the activities for the Third National Space Grant Conference held at the Clear Lake Conference Center located about 5 miles east of the Johnson Space Center. The Conference started on the 10th of January and continued through the 13th.

The balloon was a Winzen super pressure balloon 76 feet in diameter designed to lift the same 50 pound payload members of the club flew to Cokeville, Wyoming last year on 23 September. Three changes were made to improve the operation of the payload. The down link packet frequency was moved to 145.75 to get it away from the two beacons running at 144.280 and 144.300, the output power of the ATV amplifier was reduced to 5 watts to make it more compatible with the other transmitters on board, and, finally, Brian, N7QAR, added an inhibit to the 16 minute automatic shutdown to turn this feature off once the balloon was above aircraft airspace.

The weather played a major role, as usual, in getting the balloon away. The conference leaders gave us 4 windows (Monday, Tuesday, and Wednesday mornings and Wednesday afternoon). Monday morning the winds were above the 5 knots required to handle the balloon and the try for that day was scrubbed. Tuesday looked like there would be no



**UP, UP, AND.....AWAY!**

chance to get into the air. A front was predicted to go through the Houston area just at 7 AM. Wednesday morning looked like the best bet. Being optimistic we showed up anyway at 4 AM on Tuesday just in case the weather predictions were a little off. It turned out the winds died down that morning so we trooped out to the field to launch the balloon. Getting ready to go went smoothly and we launched the balloon at about 5 minutes to 8 on the 12 of January. The balloon rose from the ground in the slow majestic way that superpressure balloons do and soon disappeared into the overcast.

The ATV gave some great video for the couple minutes before the balloon got into the overcast. The P5 video resumed in the bright sunshine above the clouds. Unfortunately there were problems with the VCRs on the ground and not a lot of the video was recorded.

The launch of this balloon was eagerly awaited by many amateurs along the gulf coast and particularly by hams in Florida who were prepared to welcome the balloon as it came over the horizon. Packet descriptions of the flight had been sent by Dan, KA0EOF and Tyler, N7UWX and others to all hams in the USA giving times and frequencies and other information. Harl and Clayton, AC7O had also joined many HF nets to let people know about the flight.

The balloon proceeded as expected in it's climbout. It headed in an easterly direction making its way over to the Lake Charles, Louisiana area. Apparently the balloon had a small leak and wouldn't go any higher than 82,000 feet. Once the balloon got to Lake Charles the winds died and the balloon just sat in place (See BALL...on page 3)

## B.A.R.C. OFFICERS AND BOARD - 1993

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## The Ohm Town

### News

is published monthly, except  
August, by the  
**Bridgerland Amateur  
Radio Club, Inc.**  
798 North 1500 East  
Logan, Utah 84321

Dues for the Bridgerland Amateur Radio Club are \$10 per year for full membership and family memberships are available for \$12 per year. Only one copy of *The Ohm Town News* will be sent to a single address, unless full memberships are paid for each person wishing to have a copy. Dues can be paid to the Treasurer or to any executive officer and are due January 1st of each year. "Repeater Dues" are made on a volunteer basis.

Club meetings are held the second Thursday of each month, Sept.-May in room EC107 of the Engineering Building on the USU Campus. Starting time is 7:30 PM.

## THE PRESIDENT'S SOAPBOX...

I have noticed an encouraging sense of enthusiasm as I have spoken with various members of the club about our sponsored activities. I am pleased with the willing response we received at the club meeting. We will choose committee heads who will contact you about the activities. Involvement in these activities by amateur radio operators helps the community and also helps us to become more proficient.

I would like to thank Kevin Reeve N7RXE for being the training coordinator for last year's Technician classes. This year Clint Wellard KB7PNI has offered to be our training coordinator. He will organize the

classes which will begin in early March. We will announce the times and dates in our weekly nets. We hope you would let your friends and family know about these classes so they can be prepared to pass the tests which we have scheduled for 17 April 1993.

We will also be starting General Class training sessions. We have asked Jeff Tingey KF7ZX to head up these sessions. We have had several requests for these classes, and are excited about what they will achieve. In support of these classes we have had some discussions of having local Morse Code practice transmissions and nets. We have also talked about having a build it night where we could make some QRP (Reduced Power) HF rigs in the Novice Bands to offer more encouragement for advancement. Please let me or Jeff know of your

interests in this class and Morse Code sessions.

I would also like to encourage all members of the club to invite amateur radio operators of the valley, who do not belong to the club, to come to our meetings. I think they will enjoy the meetings and hopefully support our efforts in community service.

73,  
Joe Corbett N7NJR

## BARC MEETING

11 February 1993

7:30 pm, Room EC107

We will be discussing emergency preparedness, 72 hour kits, and grab and go kits.

Scott Cannon N7LMO Will be giving the presentation, with Mike Farr KG7FZ giving a demonstration on 72 hour kits.

There is some interest in QRP radio equipment in the club, and we will be trying to organize a group who may be interested in building receivers and transmitters. It would give the new hams a chance of getting some HF gear very inexpensive.

This should be a very interesting evening. We hope everyone can make it.

Mike Farr KG7FZ

## 1993 DUES

As much as we hate to see it come, it's that time again when dues are due! We remind you all that this issue of the OTN will be the last one mailed in 1993 to those who do not pay their dues. If you will check the label on the issue this month, there will be a "93" in the upper right corner of the label if our records show that you have paid. If not, you will have until February 22 to get them in to the Treasure and get on the list for the March issue of this newsletter.

Brian's address and phone number are on page 2 and you may either mail or take your dues to him. The club meeting on the 11th would also be a good time. Please don't forget the repeater fund when you can help.

Thank you!... Editor

## BALL...continued from page 1.

sending good packets out over it's footprint to all packet stations. The 144.300 beacon and the 10 Meter beacon supplied by Bill Brown, WA8ELK, were also transmitting back to stations in the Houston area. Harl set up the ATV receive equipment at this point and got a good P4 picture.

Once the balloon got to southwest Louisiana it began to play tag with Gil and Harl who were trying to stay under the balloon. First it would head back west towards Texas and then back to the east just to see if the chasers could keep up. This kept up through the afternoon and into the evening when the balloon began a slow decent again going down to about 60,000 feet where it remained until the payload was separated at about midnight near the small town of Melville, Louisiana.

The next morning the search for the payload began. Harl and Gil, along with several local hams, got to within a few hundred yards of the payload but they could not get to it before dark because of the wooded, swampy area they were in. The beacon on the balloon was never heard. It was triggered to come on at separation but it apparently never started up.

At the same time that Gil and Harl were searching for the payload on Wednesday, a deer hunter in the area was about to have an close encounter of a strange kind. When Ramon Jarreau found the payload he could hear a strange noise not ever heard before in the wilds of Louisiana. The 145.75 frequency is used as a packet node in that area and he heard the P50 radio responding to the transmissions. Not knowing what he had come up against he headed out to find someone to consult with about this strange thing that he had found in the swamp. He came back with the brother of the farmer that owned the land and together they decided the thing was OK so they loaded it up on their ATV and brought it home. It took them until the next day to get the news to Gil and Harl. They promptly drove out to the area and retrieved the payload from the back of their pickup truck.

In its flight from Texas to Louisiana, this payload traveled just about 220 miles as the crow flies. It flew just over 16 hours and generated about 150 pages of data over the packet downlink. Although the folks in Florida were disappointed that the balloon never made it to their neck of the woods, it was a great success and a great flight.



*Gil and Harl, recovery among the Bayous!*

## MEETING REPORT

### January 1993

The first regular club meeting of 1993 was held on January 14, beginning at 7:30 PM in room 107 of the Engineering Classroom Building, Utah State University. The meeting was under the direction of Joe Corbett N7NJR, club president.

### PROGRAM

**Dan Anderson KA0EOF,  
Net Manager**

Dan took the floor for discussion of the following proposal.

It was proposed that a nightly net be held each evening at 2100 (9:00 PM). A suggested topic format was proposed with a different subject each night. More details on this proposal will be published in the March OTN in an article by the net manager.

Clayton Clark AC7O re-emphasized that the use of the 146.72 repeater obligates one to prepare to help the county in the event of an emergency, as they are providing the site support for the repeater. The county is also very committed to providing us the opportunity to help in county emergency operations.

**Jamie Forbush N7XLH,  
President of the SVARC**

(Sky View Amateur Radio Club)

Jamie took the floor and gave a report of activities at Sky View. He reports that there are now 12 students at Sky View who are licensed and most of them are members of the club.

SVARC now has two meter antennas, tower, and are working to get ATV going there. They also have packet capability and an HF transceiver.

Jamie asked for continued help from the BARC members for demonstrations, training, and emergency preparation. He also offered the SV site for a digipeater. They already have a cross-band repeater system running on 144.44/440.04, which we can use.

Support for the club initially came from the school who funded the original antenna and tower and who provides an advisor. The club charges \$10 per year dues.

They are running a weekly net on 144.44, Wednesdays at 8:00 p.m. Jamie invited anyone interested to feel free to check in and offer support for their net.

**Stan Wellard N7UXC**

Stan took some time to report on the activities of early January in the Bayous of Texas and Louisiana. See the article in this issue for details.

**Scott Cannon N7LMO,  
Chairman of the Satellite  
Committee,**

Scott reported on the status of the satellite ground station project and announced a meeting to be held. We will be having reports updating activity of this committee in upcoming issues of OTN. If you would like to be involved with this activity, please contact Scott.

### CLUB BUSINESS

1. Joe encouraged everyone to hand in their interest survey and thanked those who had already done so.

2. A suggestion was made that there may be many who would like to build a long tone monitors and that it may be a good project for a club build it night.

3. Utah Hamfest 94 Publicity Chairman Don WA7VNQ reports that

each club is expected to provide a minimum of \$100 seed money to get the project off the ground. It will be up to the club to determine the method by which the money will be raised. The next meeting for the UHF 94 committed is to be held on Saturday, February 27, 10:00 AM, Weber State University Engineering Building, Ogden. Anyone interested is invited to attend.

4. Joe re-emphasized that anyone interested in doing so should contribute articles for the OTN.

6. Harry Ames KG7RC and his son Mike KB7MIG had their home made quad on display.

7. Adjournment at 8:50 PM and refreshments followed.

### EASY BUILD J-POLE ANTENNA

One of the best and easiest antennas to build is a J-Pole. They are especially suitable as an outside antenna when you are operating only a hand held antenna or low power radio of any type.

I have included plans for a version of this antenna. Many of us in the valley have built one or two of these and have really had good luck with them. Some of you newer hams may want to give it a try.

The antenna can be mounted on any pole or drain pipe, but try to get it where distance from any other object, especially metal, is maximized.

Coax choice is important, and try to keep the length as short as possible. Check the loss specifications on the type of coax you are going to use to get familiar with losses you may experience.

Good luck and I am sure you will be very happy with this antenna and how it operates.

Don WA7VNQ, Newsletter Editor

## 72-HOUR EMERGENCY SUPPLIES IN INDIVIDUAL'S BACK PACK

### CLOTHING/PERSONAL

- 1 Complete Change of Clothing, Layered Method
- 1 Summer Hat and one Winter Hat
- 1 Coat (hung on outside of pack)

### COMMUNICATIONS

- 1 Whistle
- 1 \$10.00 in change with "Out-of-State" Contact Information
- 1 Pad and Pencil Set
- 1 Metal Mirror
- 1 Information Packet--Instructions and Procedures ("Code 3" Card)

### FIRE/WARMTH

- 1 Box Wind/Waterproof (Hurricane) Matches
- 3 24-Hour Heat Packs

### FOOD

- 2 Apple Juice, 6 oz.
- 3 Sugar-free Hot Cocoa Mix
- 12 "Equal" Sweetener Packs
- 1 Crystal Light Lemon Drink
- 1 Tablespoon Table Salt
- 1 Trail Mix (salt-free)
- 3 Instant Oatmeal Cereals
- 1 Instant Dry Milk (makes 1 quart)
- 3 Plastic Spoons, Forks & Knives
- 1 Chicken-flavored Dry "Cup-of-Soup" Mix
- 6 Large Napkins
- 1 Bowl & Glass
- 1 Metal Fork, Spoon, Knife
- 2 Emergency Food Rations

### LIGHT

- 3 12-Hour Light Sticks w/string
- 1 Flashlight with batteries (not installed)

### MEDICAL

- 1 Mini-Medical Supplies
- 3 Dehydration Drink Formula
- 1 Mini-Manual/Emergency Procedures
- 1 Personal Medical Prescription

### RECREATION

- 1 Deck of Playing Cards

### SANITATION

- 3 Dust Masks
- 3 Infectious Waste Bags
- 1 Tissue Paper (small roll)
- 1 Mouth Wash (4 oz.)
- 1 Toothbrush

### SHELTER

- 2 Emergency Blankets
- 2 Large Garbage Bags

### TOOLS/GENERAL REQUIREMENTS

- 1 Swiss Knife
- 1 Pair of Leather Gloves
- 1 Cloth Duct Tape, 30 yards

### WATER

- 18 Emergency Water Rations
- 1 Bottle Water Purification Tablets

## MEDICAL PROVISIONS

Many medical concerns in a disaster are: Lacerations, broken bones, shock, hyperthermia, heart attacks, head injuries, diarrhea, constipation, dental and oral injuries, animal and insect bites, and rashes. The following medical supplies are suggested items to meet varied medical emergency requirements:

MEDICAL ITEMS	FAMILY/INDIV/MINI		
Ace Bandage (3" wide).....	1	1	
Adhesive Tape (1" x 10 yds.).....	1	1	1
Alcohol Pads.....	24	12	6
Antibiotic Ointment (1 oz. tube).....	1		
Antibiotic Ointment (.32 oz. foil packs).....		3	3
Anti-Diarrhea/Nausea Tablets.....	24		
Antiseptic Povidone Preps.....	10	3	3
Applicators, Sterile Cotton Tipped 6".....	8	4	2
Bandages, Butterfly (Medium & Large) (each).....	8	2	
Bandage, Triangular.....	2	1	1
Band-aids (3" x 3/4").....	50	10	5
Cold Pack, Small.....	3	2	
Compresses, Sterile (5" x 9").....	6	2	1
Emergency Mylar Blanket.....	1		
First Aid Booklet.....	1	1	1
Gauze Pads, Sterile (2" x 2") (2/pkg.).....	25	10	2
Gauze Pads, Sterile (4" x 4") (2/pkg.).....	25	10	2
Gauze Roll, Non-Sterile (3" x 5 yds.).....	6	2	2
Gloves, Disposable (Pair) (Vinyl).....	4	2	1
Heat Pack (Maxi Size--24 hours).....	3	1	
Hydrocortisone 1/2% (1 oz.).....	1		
Hydrogen Peroxide (8 oz.).....	1	1	
Mirror, Metal.....	1	1	
Napkins, Maternity-type with tails.....	6	3	
Orajel, Maximum Strength (1/2 oz.).....	1		
Pain Reliever Tablets (Non-Aspirin).....	50	12	6
Paper Sack (Hyperventilation).....	2	1	1
Pen Light, Disposable.....	2	1	
Safety Pins.....	6	3	2
Saline Solution w/Irrigating Syringe.....	1	1	
Scissors, EMT Utility Sheer 7-1/2".....	1	1	
Scissors, Tape.....			1
Splint, Cardboard, Padded.....	1		
Sponges, Cover (4" x 4").....	100		
Straws, Plastic (Drinking Purposes).....	5	2	1
Thermometer (non-glass).....	1		
Tongue Blades.....	5	3	2
Towelettes, Cleansing.....	100	48	24
Towelettes, Medicated.....	24	12	6
Tweezers, Slant Tip.....	1	1	
Vaseline, Tube (1 oz.).....	1	1	
Water, Emergency Packet (4.227 oz.)	1	1	

Other suggested items to include: Antihistamine (for colds, allergies, restlessness); decongestant; laxative; antacid; throat lozenges; snakebite kit; and personal medications.

1925m

72-HOUR EMERGENCY/SURVIVAL KIT

This 72 hour kit should meet the needs of your family. Use ready-to-eat foods your family will eat and hobbies and entertainment your family likes to do. Include individual medication as required by your family members. Whatever container is used should be portable. A class ABC fire extinguisher is recommended for each home.

IMMEDIATELY AVAILABLE

Battery powered radio  
Flashlight and extra batteries

EMERGENCY NEEDS

Instruction manuals on  
Emergency Preparedness  
Water storage  
Sleeping bags & blankets

SANITATION KIT

Plastic bucket with  
tightly fitted lid  
Plastic bags and ties  
Toilet paper  
Disinfectant  
Improvised toilet seat  
Feminine hygienic needs  
Paper towels, Soap  
Paper cups  
Paper plates  
Plastic utensils  
Can opener  
Utility knife

STRESS FACTORS

Children  
Coloring Book  
Crayons  
Adults  
Books or Needle Work

CAR NEEDS

Standard First Aid Kit  
Blankets  
Flashlight & Batteries  
Reflectors and flares

INDIVIDUAL FAMILY NEEDS

SUGGESTED ADDITIONS

Family Photographs  
Insurance Information  
Identification for each  
Family Member

FOOD

Ready-To-Eat (canned)  
Meats: Tuna, Sardines, Spam  
Vienna Sausages  
Fruit Cocktail  
Peanut Butter  
Powdered Milk  
Infant Care: Canned milk and Bottles  
Dried Fruit: (caution-drink  
plenty of water)  
Raisins, Prunes, Fruit Leather  
Crackers

STRESS FOODS

Sugar cookies  
Sweetened cereals  
Hard candy

STANDARD FIRST AID KIT

First aid manual  
Aromatic spirits of ammonia  
Scissors  
Table Salt  
Baking soda  
Eye drops  
Safety pins  
Matches  
Adhesive or paper tape  
Bandages  
Telfa pads 4" X 4"  
Triangle Bandage  
37"X37"X52"  
Roll of Gauze  
Coban Elastic Bandage  
Splints  
Popsicle Sticks  
Shingles or thin board  
40 Page newspaper  
Heavy String

AT LEAST ONE CHANGE OF CLOTHING  
FOR EACH FAMILY MEMBER

Medical Information Sheet  
Will or Trust Information  
(Copies of Each)

## Radio Box Inventory

Multimeter  
Message Forms  
String  
Radial Wire  
2m J-Pole BNC  
2m J-Pole PL239  
3' Coax Jumper  
12' Coax Jumper  
Metz Ant. Base  
AC Ext. Cord  
3-way AC Extend  
Hustler HF Base  
Ant. Insulators

### DC Cords

Battery Clamps  
Lighter Plug  
Dual Ltr Socket  
Jumper Cords  
Clip/Coax Power

### RF Adaptors

- PL259 Angle  
- PL259  
  fen/female  
3 -PL259 Barrel  
- PL259 male /  
  BNC female  
- BNC Angle  
- BNC Male /  
  PL259 Female  
- PL259 Plug

### Audio Cords

1/8" to 1/8"  
1/8" to RCA  
RCA to RCA  
1/4" Phone  
1/8" to 1/4"  
stereo

### Tools

Sm. Screwdriver  
Lg. Screwdriver  
Sm. Phillips  
Lg. Phillips  
Slip Joint Pliers  
Needle Nose  
Wire Form Pliers  
Flashlight  
Batteries AA, D

### Small Pulley

### Misc.

2m HotRod Ant  
Electrical Tape  
Wire Nuts  
Pencils  
Solder  
8 pin Mike Jack  
6 pin Mike Jack  
Pencils  
Pen  
Lead Ball  
Matches  
Lighter  
Wire  
Jumper Cord  
Bungie Cord  
CW Key  
Reference Book  
Audio Adaptors  
Mini Male-1/8 F  
1/8 Stereo Male  
  1/8 Female  
1/8 Male 1/4  
  female  
1/4 Male 1/8 F  
RCA F to RCA F

\*\*\*\*\*  
\*End Radio Box\*  
\*\*\*\*\*

### RADIO EQUIPMENT

HF Transceiver  
HF Power Cord  
HF Mike  
CW Keyer/Key  
Ant. Tuner  
Coax Jumpers  
Power Supply  
AC Inverter  
Headphones  
Propagation Info  
Coax  
G5RV Antenna  
Hustler Ant  
Hustler Resonat.

2m Transceiver  
2m Power Cord

2m Mike  
2m HT  
2m Speaker Mike  
2m Speaker  
2m Power Supply  
2m Extra Battery  
AA Batteries  
HT Charger

### Data Equipment

PK-232  
PK-232 Manual  
PK-232 Pwr Sup  
Parallel Cable  
Serial Cable  
Diconix Printer  
Diconix Manual  
Diconix Ink  
Paper  
Z-181 Computer  
Z-181 Manual  
DOS, Packratt, WP, Blank  
Disks  
PACRATT Manual  
Interface Cords

### MISC.

Tape Recorder  
Cassette tapes  
Soldering Iron  
Ant. Wire  
Clock  
Logbook  
ARRL Op Guide  
Camera / Film  
Book  
Consecrated Oil  
Phone #  
Passport  
Scriptures  
Medicine  
H<sub>2</sub>O Filter  
AMEX Card  
Shaving Kit  
72 Hour Pack  
Clothing



REV.	ECO #	APPROVED BY	DATE

NOTES:

Use conventional sweat soldering process for all joints.

Seal all open areas at the feedpoint, using silicone outdoor caulk, to prevent corrosion of feedpoint.

GENERAL DIMENSIONS:

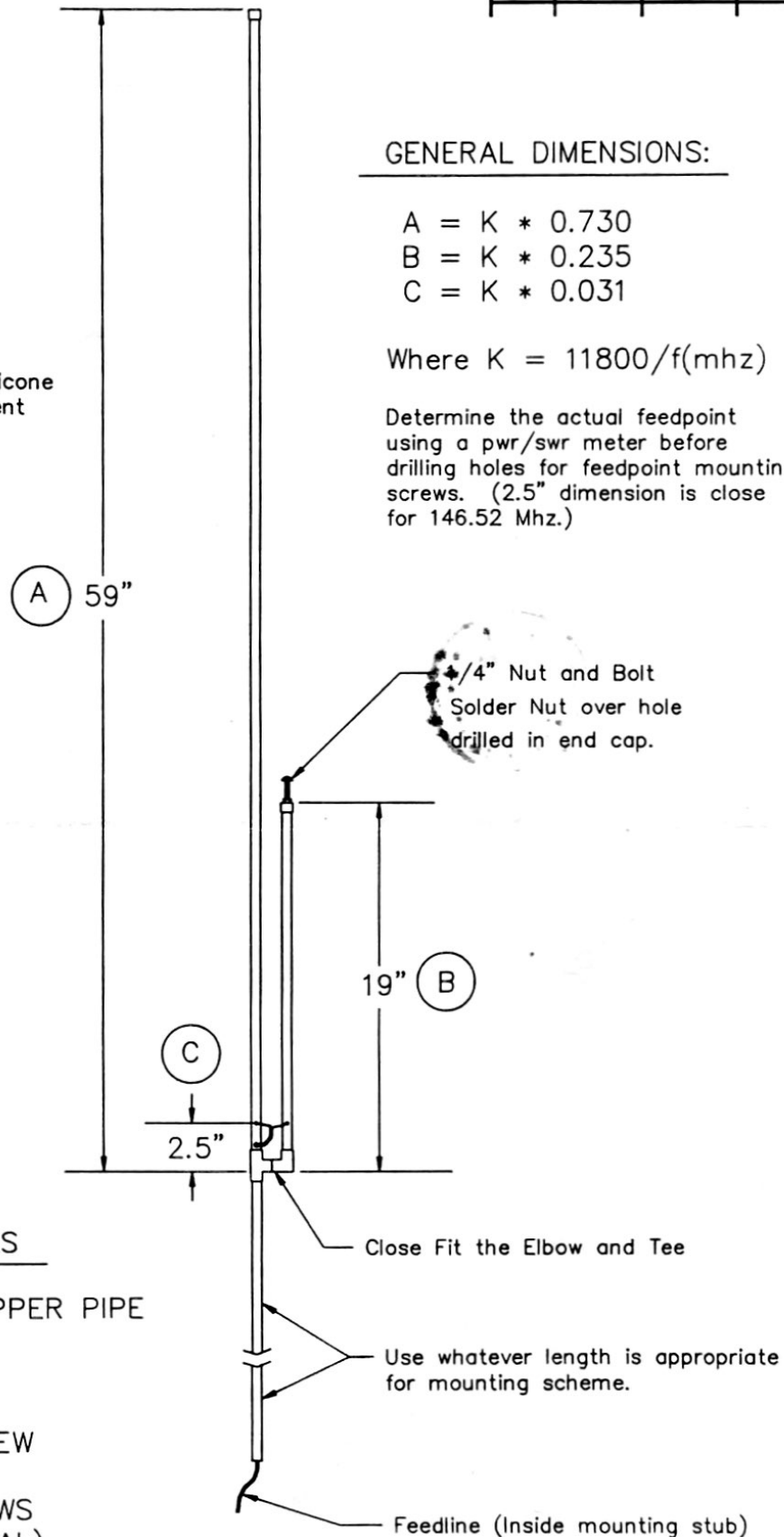
$$A = K * 0.730$$

$$B = K * 0.235$$

$$C = K * 0.031$$

Where  $K = 11800/f(\text{mhz})$

Determine the actual feedpoint using a pwr/swr meter before drilling holes for feedpoint mounting screws. (2.5" dimension is close for 146.52 Mhz.)



BILL OF MATERIALS

- 1 - 10' 1/2" COPPER PIPE
- 2 - 1/2" CAPS
- 1 - 1/2" TEE
- 1 - 1/2" ELBOW
- 1 - 1/4-20 SCREW
- 1 - 1/4-20 NUT
- 2 - SMALL SCREWS (SHEET METAL)

TOLERANCES	DRAWN BY:	APPROVED BY:	DATE:
X/X = + - 1/32"	DESCRIPTION: J-POLE ANTENNA FOR 2 METERS		
.XX = + - .015"			
.XXX = + - .010"			
UNLESS OTHERWISE NOTED	DOCUMENT NUMBER:		