



ZERO BEAT

Southeastern Massachusetts
 Amateur Radio Association, Inc.
 54 Donald Street
 South Dartmouth, MA 02748



OUR 67TH YEAR

Volume 35, Issue 7



SEMARA



July 1999

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TOWER IS UP!

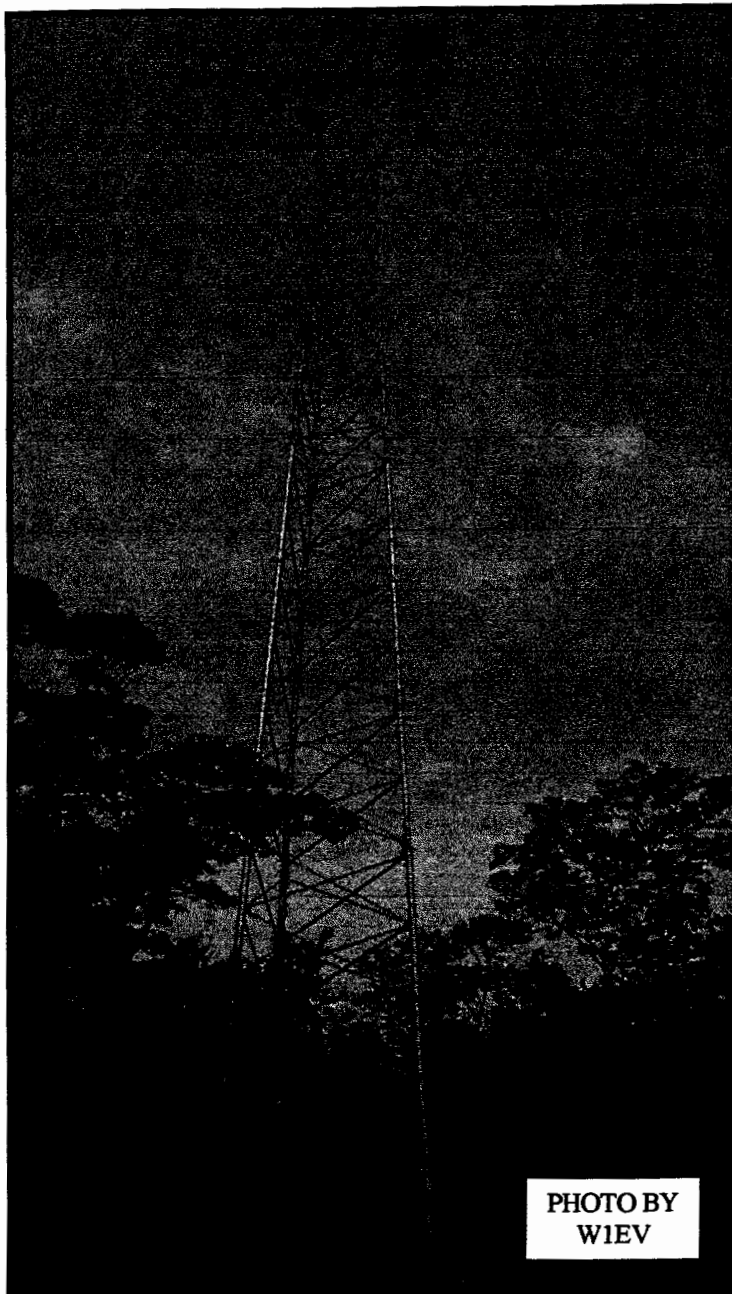


PHOTO BY
 WIEV



MEETING HIGHLIGHTS

The June business meeting was called to order at 7:04 pm by President Chris Smith. Twenty-eight members and one guest were present. Following the salute to the flag and roll call, the Secretary's and Treasurer's reports were read and accepted.

Committee reports followed: *Technical* – Preamp and helical filter tuned and ready for service. Old repeater to be overhauled in coming weeks. *Activities* – No report. *Buildings and Grounds* – No report. *Scholarship* - No report. *Ham Class* - As we go to press, 6 out of 16 students have their license. *Constitution* – No report. *Tower* - See report on this page for details.

Communications - None.

Ratifications – Kenneth Branco, KE1IK, and Paul Smith, N1VKB, were voted conditional members of the association. Marino Coppellotti, N1PVP, and Alan Costello, KB1EAG, were voted into full membership.

Old Business - The membership discussed the importance of all members identify-

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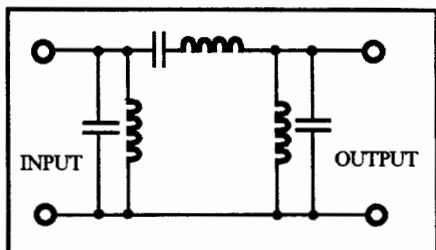
ADVERTISING

Commercial ads the size of a business card will be accepted. Rates are \$5.00 for one insertion, \$20.00 for six insertions, and \$35.00 for twelve insertions.

Non-commercial ads up to forty words in length will be accepted. Rate is \$3.00 for one or \$12.00 for six insertions. Club members have one free non-commercial ad per month.

**THE DEADLINE FOR
 SUBMITTING ARTICLES FOR
 PUBLICATION IS THE 15TH
 OF THE PRECEDING MONTH.**

NAME THAT CIRCUIT



- 1.) Low-Pass Filter
- 2.) Band-Pass Filter
- 3.) Band-Stop Filter
- 4.) High-Pass Filter
- 5.) R/C Network

ANSWER - See Page 6

MEETING- continued from page one

ing themselves prior to, and at the completion of an autopatch.

New Business - The following motions passed:

- 1) Motion to allow **Tony Duarte, N1XRS**, to place a collection jar in the clubhouse to benefit the Cancer Society's Relay For Life.
- 2) Motion to auction off the Heathkit radio equipment donated by **Joe Rodrigues, N1BZZ**, following the meeting.

For the Good of the Club - **Sam Wagstaff, N1PGN**, donated a "Mystery Box" to benefit the club via auction after the meeting. Sam also donated a 3X5 American flag to be placed atop the new radio tower when completed. (This is in place of the usual and customary pine tree used to "top" a new tower.)

The meeting adjourned at 7:45 pm. Immediately following the meeting, the "Mystery Box" and Heathkit radio equipment were auctioned off, with the club realizing \$120.00! It is rumored that one member ended up buying a rig he really didn't want. It seems he was just bidding up the price for the benefit of the club. (Word on the street is he later sold it to the other bidder.)

Following the auction, several members headed off to the usual ragchewing at the "Second Meeting".

NEXT SEMARA VE SESSION

**August 7, 1999
 10:30 am
 SEMARA Clubhouse**

LOCAL VE SESSIONS IN JULY

08 Providence, RI
 Judy Nelson
 401-231-9156

10 Falmouth, MA
 Ben Fleck
 508-540-2583

12 Brookline, MA
 Bob Wondolowski
 508-865-5822

21 Cambridge, MA
 Nick Alterndburnd
 617-253-3776

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"One of the greatest delusions in the world is the hope that the evils in this world are to be cured by legislation."

Thomas B. Reed (1886)

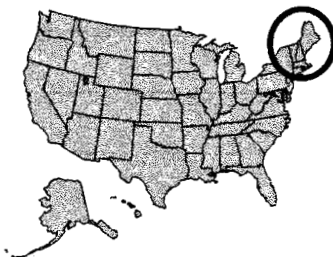


CLUB NOTES

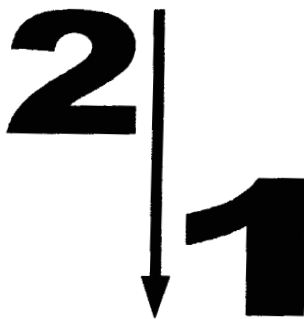
Well, here it is July again! Seems like we just finished celebrating the fourth! Anyways, the fourth is the only holiday in July, so live it up. Have a cookout. Go see the fireworks. (Who said hams are a bunch of nerds?) Party!!!



Matt Howland, K1DIY, is back from his winter stay in Florida. Matt is an "Old Timer", first joining the club back in the 1930's! Welcome back to New England, Matt.



It was a big move. No one really likes to move. But the dreaded day arrived and the move was underway. By the end of the day, **Dick Simpkin, WA1CRA**, had moved from the second floor to the first! Best of luck in your new apartment, Dick.



Check this web site out! It has links to just about every ham radio web site in the world. You might call it the master index to all ham sites:

www.ac6v.com/

A certain club member turned 50 and didn't tell a soul. However, his wife did! *Happy 50th, Bob Metivier, N1XZJ.*

THE INTERNET



OVER THE HILL

Members are reminded to PLEASE notify Bill Miller, K1IBR, of any change in your E-Mail address. Several members have had E-Mail "bounce" when notices were sent out on the SEMARA-L mail list. Send your new address information to: k1ibr@lrh.net



Well done! Following the tower work on Saturday, June 12th, **Chef Ed Blouin, KA1AW**, cooked up a mess of cheeseburgers, hot dogs, hamburgers, and linguica, for the whole gang. **Al Costello, KB1EAG**, donated the "goodies" for the tower cookout party. *Thanks fellows!*



Tony Oliveira, W1PWL, retired Filter Design Engineer at Cornell-Dubilier Electronics presented the June Tech-Talk on filters. The talk was very interesting as Tony provided all the information you need to "roll your own" interference filters.

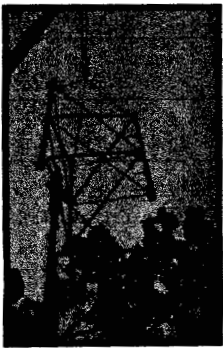
FILTER SECRETS REVEALED!

A "Tip o' the Hat" goes out to the following members who helped disassemble the old tower after it was on the ground: **Alan Dulong, WB1FQP; Andy Reuter, WA1FNM; Scott Szala, W1EV; Bill Field, WA1FYF; Henry Blanchett, W1GYL; Ed Rovas, WA1VXY; Marty Jordan, KA1YFV; Chris Smith, K1CJS; Bill Miller, K1IBR; Alan Costello, KB1EAG; and John Carreiro, W1ZYV.** *Thanks fellows!*

THE NEW COMMUNICATIONS TOWER IS UP!

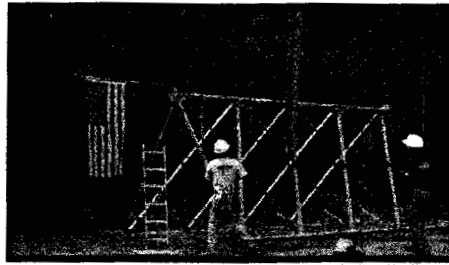
Saturday, June 12, 1999. The day the new 180 foot high communications tower was erected and the old 160 foot high tower came down. A day to remember!

The crew from NETCOM spent all week assembling 20' tower sections on the ground in preparation for the big day. At 6:35 am on Saturday, June 12th, the crane arrived on site after a ride from Boston. The crane was a veritable MONSTER! It rode on ten huge wheels, which turned in unison to permit tight turns. The main arm of the crane was a set of nested rectangular tubes that hydraulically extended like a radio antenna on a portable radio. The crane could reach over 190 feet without its extension installed. The main "hook" at the end of the cable weighed a ton according to the crane operator.



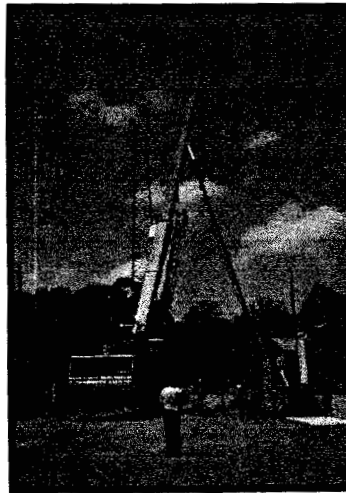
GOING UP!

One by one, the crane lifted the 20-foot tall tower sections into place. The whole operation went very smoothly with no problems or hitches. As the final section was lifted into place (with the American flag waving proudly in the breeze) the crowd of spectators broke into thunderous applause! It was a scene to warm your heart.



TOP SECTION READY TO GO

Next, the crane was moved into position to lower the old tower. The crane hook was attached to the old tower at the 130 foot level. After the crane took up the slack in the cable and was holding the tower, the old tower was cut free from the cement pad and all the guy wires were released. Now the crane was holding the old tower, antennas and all, in the air! Finally, the crane operator slowly lowered the whole shebang gently to the ground. It was a sight to see.



COMING DOWN!

Immediately following the tower work, the barbecue grill was fired up by Chef Ed Blouin, KA1AW, and it was party time. Ed cooked up a mess of hamburgers, cheeseburgers, hot dogs, and linguica. He also brought along a tub of his *WORLD FAMOUS* homemade relish. The usual assorted condiments and treats were also available including potato salad and potato chips. We are also deeply indebted to Alan Costello, KB1EAG, who provided the bulk of the "goodies" served at the party. *Thanks, Ed & All!*

The next day (Sunday) several club members stripped all the antennas and hardline coaxial cable off the old tower. It was hot and humid, but they hung in there until the job was done. It took about three hours to complete the dismantling.



OLD TOWER ON THE GROUND

The tower was then split into 30 foot sections and stacked next to the clubhouse. All useable parts were stored in the shed. Be sure to attend the next business meeting if you are interested in acquiring some tower sections.

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and work platform. \$250

YASEU 800 rotator, mint condition. \$180

TENNADYNE 5 element log periodic antenna. \$125

Contact: Chuck Gaspar at (508) 984-5609

REPEATER NEWS AND UPDATE

Thanks to the generous donation of a low-noise Mirage GaAsFET preamp by Scott Szala, W1EV, and a four-cavity helical filter by Rick Cabral, N1RFI, the repeater will have better "ears" when operating from the new tower.

The preamp was mounted directly on the output of the helical filter, and then the whole assembly was tuned as a unit. Overall gain was measured at 22.5 dB. The Mirage preamp has a noise figure of .6 dB according to the manufacturer.

The repeater, which was previously situated on a bench in the club's boiler room, will be rebuilt into a large relay rack for installation in the new equipment building at the base of the new tower. While this work is underway, the club's backup repeater will be on the air using a temporary antenna mounted atop the tri-band beam next to the club. The temporary antenna is being loaned to the club by Rick Cabral, N1RFI.

Unfortunately, the range of the repeater will be shortened while the temporary system is in use. But once the new system goes on the air from the new tower, everyone will be pleasantly surprised.

Please bear in mind that at some point in time the repeater will be off the air for a day or two while the duplexer is overhauled and retuned. This work shall be done mid-week to lessen the inconvenience.

Rick Cabral (Jr.), N1RFH, donated a Communications Specialist Model TS-64 CTCSS Encoder-Decoder for use on the repeater. The unit will be programmed for 67.0 hertz which will always be on the transmitted signal. This will allow members with CTCSS decoders in their radios to block out other repeaters on 147.00 – in particu-

REMEMBER WHEN?

Southeastern Mass. Amateur Radio Assoc.

**50TH ANNIVERSARY 1982
MEMBERSHIP CARD**

THIS IS TO CERTIFY THAT

NAME _____

IS A MEMBER IN GOOD STANDING

SIGNED _____

Wow! Seventeen years have passed since the special 50th year anniversary membership cards were issued. It seems like it was just yesterday. In only eight years we will be celebrating our 75th anniversary.

lar the Sommers, CT machine which blasts into this area every time we have an inversion.

The CTCSS decoder on the receiver can be turned "on" or "off" as the situation dictates. It is anticipated that it will be "off" most of the time, only being put "on" when skip is tripping our machine. Like the transmitter, it shall operate on 67.0 hertz.

Years ago, the driver transistor in the transmitter failed. To keep the repeater on the air, a general purpose replacement was installed. However, the power output was halved. As part of the repeater overhaul, that driver transistor was replaced with the proper type and full power output was restored.

Stay tuned – more to come next issue!

HENRY BLANCHETT AND BOB METIVIER WIN THE FOXHUNT!



It finally happened! The team of Henry Blanchett, W1GYL, and Bob Metivier, N1XZJ, won the foxhunt. The fox, Bill Miller, K1IBR, was filling in for Ritchey Guild, KB1EAJ, who had another commitment that evening. Bill hid on a little known section of Morgan street that runs off Florence street near Buttonwood Park. You had to travel on two one-way streets to get there. However, it was a piece of cake for Henry and Bob. They found the fox in about half an hour. Not so lucky were Ken Howland, N1AVA, and the perennial winner Tim Smith, N1BTQ. They took about one and a half hours to find their prey. Tim came in last, but considering he came to the hunt late from out-of-town the showing was admirable. As usual, the group headed off for chow, ending up at Burger King in North Dartmouth for a change. The next hunt should be a doozie, as Henry and Bob are dying to select their first hiding spot. (Pack a lunch?)

THE SECRET OF CHOPMIST HILL

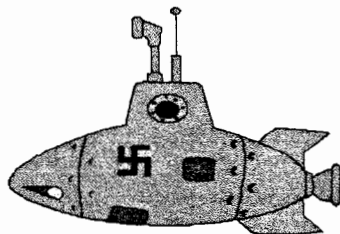
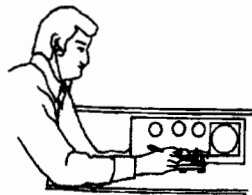
In mid 1940, the Scuddard estate, once a thriving chicken farm, was converted into a top-secret counterespionage monitoring station. The 14 room Scuddard estate was located atop Chopmist Hill in Scituate, RI. Although Chopmist Hill was one of several monitoring stations across the nation, it was the most famous and important.

From an radio engineering standpoint, Chopmist Hill was blessed by Mother Nature and mankind alike. There were no high voltage power lines nearby, no great mineral deposits, and no heavy industry. In sum, the ambient noise level was extremely low – and being miles from nowhere, it was the ideal site for a top-secret clandestine radio monitoring station.

And monitor they did! Using the most sophisticated radio equipment available at the time, the 40 operators of the station worked in shifts around the clock. There were 37 men and three women operating the station. And all were amateur radio operators to boot!

Among the equipment they used were panoramic spectrosopes similar to our modern spectrum analyzers, and selectable sideband receivers. But the crown jewel was the huge directional antenna at the site. The antenna looked like a large two-element vertically polarized beam mounted atop a structure reminiscent of a windmill building. Inside, an operator turned a large wheel to rotate the antenna and get a “fix” on suspect transmissions.

Using triangulation, the huge directional antenna was originally used to locate the position of German submarines in the Atlantic. And once the “U-boats” were located, Navy boats and planes paid them a visit.



Chopmist Hill saved untold thousands of lives during World War II.

Triangulation was possible since all monitoring stations were interconnected via teletype.

The directional antenna system was also able to locate Nazi clandestine radio stations around the world. Some were actual spy stations, others were so-called diplomatic stations. One such diplomatic station (used to relay spy station reports) was located in Chile, and under the Hemispheric Defense Plan of the Pan-American Union the station was shortly off the air.

Many secret transmissions to Nazi submarines plying the Atlantic were also intercepted. If the message gave the course of an Allied ship, the ship was secretly notified to immediately change course! Untold ships and lives were saved by such timely notifications. One of the ships so notified (in 1942) was none other than the Queen Mary!



The direction finder at Chopmist Hill was not only used against the German war effort, but also to locate downed Allied planes.

One such rescue effort involved a B-24 that put down on an isolated frozen lake in Northern Quebec. While on the way back from England in bad weather, it ran out of gas. Compounding the problem was the fact that the plane landed in uncharted wilderness. Using triangulation, the plane's location was found. However, the weather was so bad that only supplies could be dropped until the storm subsided. Finally, after 17 days the 25 men on the plane were rescued!



Chopmist Hill saved untold thousands of lives during World War II. Yet today few people remember the importance of this site. Chopmist Hill and the stories remaining to be told have faded from history.

TECHNICAL TIPS

Here are some odds & ends:

1) Having trouble solder-wicking the solder out of a thru-plated hole on a PC board? Try applying some fresh solder to the hole, then solder-wick it off. Works every time!

2) When mounting a PC board on a chassis, often several screws are stuck up through the chassis using a lock-washer and nut to hold them tight. The PC board is dropped onto the screws. The problem is putting the final nuts on to hold the PC board in place. Try using threaded hex-type metal spacers in place of the final nuts. The two or three inch long size is just right. You just lower it down onto the screw and tighten it up.

1999 FLEAMARKETS

- July 18 - MITT Cambridge, MA
- August 15 - MITT Cambridge, MA
- August 28 - MABC Gardner, MA
- August 29 - VEEVUS Con. Torrill, CT
- Sept 12 - SEMARA Davenport, MA
- Sept 18 - RLAFNCS Providence, RI
- Sept 18 - LARS Mansfield, MA
- Sept 25 - MITT Cambridge, MA
- Sept 26 - FABA Framingham, MA
- Oct 17 - East Treaders Rochester, NH
- Oct 18 - NUTMEG Wallingford, CT
- Oct 17 - MITT Cambridge, MA
- Nov 26 - WABA North, MA

NET DIRECTORY

— Sunday —		
8am	28.375	SEMARA NET
9:30am	50.225	Yankee SSB
3pm	28.470	UFO
7pm	147.000+	Swap Net
— 4th Sunday —		
9pm	449.575	EM-ARRL
— Daily —		
5:30pm	3.915	EM/RI NTS ssb
7&10pm	3.658	EM/RI NTS cw
6:45pm	147.315+	NTS/Trivia
7pm	146.550	SEMARA NET
8pm	145.230-	EM-NTS
— Monday to Friday —		
8am	14.262	SEMARA NET
8pm	145.490-	Weather
— Saturday & Sunday —		
8am	7.237	UFO
— Thursday —		
7pm	14.264	UFO
8pm	147.180+	Trivia
— Saturday —		
7:30pm	3.978	UFO
1800G	14.300	Coast Guard
— SEMCARES NET —		
1st Sunday of the month at 7:30 pm		
145.490- (Fairhaven Repeater)		

VISIT THE SEMARA WEBSITES



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SEMARA OFFICERS 1999



President Chris J. Smith, K1CJS
Vice-President Robert Metivier, N1XZJ
Secretary Henry Blanchett, W1GYL
Treasurer Bradford Anselmo, N1VUF

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 Martin Jordan, KA1YFV
 Scott Szala, W1EV

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William M. Miller Jr., K1IBR- Chairman
 Norman Riley, W1ATI
 Frank Fonseca, WB1ASD
 Martin F. Jordan, KA1YFV
 William Vincent, N1LTY

SEMARA EVENT CALENDAR

JULY 1999

- 1 - Business Meeting, 7:00 pm
- 3 - VE Session, 10:30 am
- 8 - 2 Meter Foxhunt @ Clubhouse, 7:00 pm
- 15 - Tech-Talk, 7:00 pm - "555 Timers" by Bill Miller, K1IBR
- 22 - Board of Directors @ Clubhouse, 7 pm



AUGUST 1999

- 5 - Business Meeting, 7:00 pm
- 7 - VE Session, 10:30 am
- 12 - 2 Meter Foxhunt @ clubhouse, 7:00 pm
- 16 - Quarterly SEMCARES Meeting, 7:30 pm @ clubhouse
- 19 - Tech-Talk, 7:00 pm - "Radio Collecting" by Charles Days



Coffee Hour at the clubhouse every Sunday at 9:00 am. Drop by and ragchew!

LOCAL REPEATER DIRECTORY

Frequency	CTCSS	Call	Location	Frequency	CTCSS	Call	Location
144				440			
145.150 -		WA1DGW	Fall River	441.400 +	192.8	WGIU	Assonet
145.490 -		KA1WBF	Fairhaven	442.200 +		N1NRL	Fall River
146.445 +1Mhz	91.5	KB1BWN	Dartmouth	442.350 +	141.3	N1OFD	Acushnet
146.655 -	88.5	WA1GPO	Falmouth	442.600 +	100.0	K1LIQ	Tiverton, RI
146.685 -		N1OEG	Plymouth	443.450 +	88.5	K1MYL	Westport
146.950 -	88.5	K1PDO	Dennis	443.600 +		NS1N	Norwell
147.000 +		W1AEC	Dartmouth	443.800 +	88.5	N1RFH	Dartmouth
147.045 +		WA1AIC	Yarmouth	443.850 +	131.8	W1ARM	Chatham
147.135 +	67.0	ND1N	Taunton	444.250 +	141.3	WA1GPO	Falmouth
147.180 +	77.0	N1FDX	Bridgewater	444.350 +	88.5	W1ACT	Fall River
147.315 +	156.7	N1BBT	Wareham	444.550 +		N1FDX	Bridgewater
220				447.075 -		N1DZD	Kingston
224.340 -		N1SGK	Dennis	NAME THAT CIRCUIT ANSWER: 2. Band-Pass Filter			

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