

ZERO BEAT

**South
Eastern
Massachusetts
Amateur
Radio
Association**

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Meeting Highlights

Here are the highlights from the November 3rd SEMARA business meeting, as reported by Karen Peckham, N1LIE:

The meeting was called to order at 7:35 pm with Vice President Robert Peckham, KA1YDG, presiding. After the pledge of allegiance a roll call revealed that 17 members were present. The minutes of the October 6, 1994 meeting were read by the Secretary, Karen Peckham, N1LIE. Morris, WB1GJO, made a motion to accept the minutes as read. The motion was seconded and the minutes were accepted. The report on income and expenses from the previous month were then read by the Treasurer, Pat Carreiro, KA1YUH. The current checkbook balance is \$1,682.93. Morris Martin, then made a motion to accept the report as read. The motion was seconded and the reports were accepted.

Committee Reports: Technical Committee - Bill Miller, K11BR, reported that he had climbed the tower and installed the new connector. He stated that there is still a problem with the antenna. The SWR is low. He hopes to make another antenna in the spring. Members reported that they have noticed improvements when using the repeater. Bob Peckham was able to bring up the phone patch from Bourne and Len Gadomski reported definite improvements towards the North. Bill Miller also reported a problem with squelching. He believes it is related to the repeater being sensitive to the heat. Possible suggestions would be to install an exhaust fan or to lower the repeater closer to the floor where it is cooler.

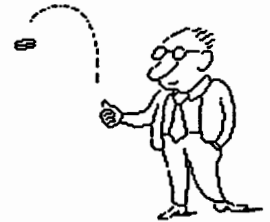
Building and Grounds - Bill Field, WA1FYF, reported that the oil tank is approximately half full. He recommends we top it off now. This way it will last into January and we will not be looking for someone to fill it around the holidays. The tank will be checked before the next meeting.

Old Business: The Christmas Party is scheduled for December 10th at Thad's. The menu was reviewed and the membership voted to have a selection of Turkey, Shrimp, and Beef. Payments should be mailed to Pat Carreiro. A notice regarding the Christmas Party will be put in the Zerobeat.

New Business: Ray Martin reported that there is an exam scheduled for this Saturday, November 5th. VE's are needed.

Nominations were made for all four officer positions, for the Board of Directors, and for Trustee. The nominations were - President - Bob Peckham, Treasurer - Pete Carreiro, Vice President - Ray Martin, Board of Directors - Linda Medeiros and Marty Martin, Trustee - Bill Miller. There were no nominations for Secretary. The President elect will find someone for the next meeting.

Doc Rielly, asked if anyone was interested in coming to the club for a computer course. The cost would be \$25.00 for the book. The course will run for four weeks, two nights a week.



Computer Class

A computer class is starting November 21. The class will be held every Monday and Wednesday Night for four weeks, 2 hours each night. The meetings are at the club house at 7pm.

Anyone is welcome to attend. Call Norm Riley, W1ATI at 997-0981 for more information.



Packet News

Remote access to FCC Database.

Remote access to the FCC database server at BBSSWL:KC1UA is now available to all interested in obtaining up to date information for any town or city in New England. Remote access is via packet messages.

Send requests to REQFRQ@KC1UA.#EMA.MA as a PERSONAL message (SP). Once your message is received, BBSSWL will process it within fifteen minutes and forward the reply in your direction within an hour.

NOTE! Do not include {} brackets in your actual requests, spaces count. Substitute the ** with the two letter designator for the state of your choice.

ME, NH, VT, MA, RI, and CT are currently supported. These commands are sent on the SUBJECT line of your message, NOT IN THE TEXT.

Command on subject line	Server response
** I	Information about the server
** ?	This information, help message will be sent.
** H	This information, help message will be sent.
** H L	List all added help files with subjects.
** H 4	Help file for the Bearing\Range routine.
** C {Callsign}	Locate stations assigned this Callsign.
** F {Frequency}	Locate stations assigned this frequency.
** M	Continue same search if prompted in the reply.
** N {Name}	Locate stations by name, XXX XXX XXX ok
** A {City/Town}	Locate stations by licensee's address.
** T {City/Town}	Locate transmitter locations by City or Town.
** Y {countY}	Locate stations by county.
** R {Record #}	Locate this record and give more details.
** B {Call} {Call}	Bearing/Range between these two Callsigns
** B {Call} {Deg} {Min} {Sec} {Deg} {Min} {Sec}	Bearing/Range to Call from Latitude Longitude in Degrees Minutes Seconds as shown above.

Examples:

MA TF BARNSTABLE 855.2125
Returns all listings from Barnstable, MA. on 855.2125.
NH YS ROCKINGHAM PP
Returns all Police Department frequency info for Rockingham County, NH.
VT T STOWE
Returns ALL listings for Stowe, VT.

TAPR HF SIG Formed

TAPR has introduced an HF Special Interest Group, the purpose of which is to serve as a forum for those involved in experimenting, and developing digital applications for HF.

The amateur bands have seen a dramatic increase in diversity in technology as well as increased activity in the use of digital modes. This is due mostly to the availability of TNCs and application of personal com-

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Online!

puters. Basic technology, however, has not changed much since the 60's and is in great need for innovation to meet future challenges.

To subscribe to this mailing list send a message to 'listserv@tapr.org' with the following line in the body of the message:

subscribe hfsig full_name

Note: Access to this mailing list is also available to Dreamer's Online! members.

News Briefs

ARRL disqualifies P5RS7

The American Radio Relay League says contacts from a 1992 to 1993 P5RS7 DXpedition claiming to be in North Korea will NOT receive credit under the League's DX Century Club, or DXCC, program. League officials cite discrepancies in documentation submitted by expedition organizer Romeo Stepanenko, 3W3RR. Questions about proper documentation were raised shortly after the DXpedition ended in January, 1993. The League says documentation supporting the DXpedition did not establish that North Korean authorities granted operating permission. And again according to the League, the documentation fails to establish whether the operation actually took place in North Korean territory.

CQ plans 50TH Anniversary Celebration

CQ magazine will celebrate a half century of service to amateur radio in 1995 with a special anniversary issue, a new group of operating awards and a variety of off air events and special opportunities. The January, 1995, issue of CQ will be a collector's item. It will include a special section devoted to the magazine's 50th anniversary. Articles will trace the past half century in ham radio as well as the "real world," and will offer highlights of CQ's own history. Advertisers will have special opportunities, as well. And many CQ columnists will

look back at how their specialty areas have changed and developed over the past 50 years.

Chaverim Scholarship

The Chaverim of the Delaware Valley has named Stuart J. Meyers, KB8JBK of Dublin, Ohio as the recipient of the \$1,000 Ed Ludin, K2UK Memorial Scholarship. Meyers is a pre-med student at Miami University. Chaverim is the Hebrew word for friend. The Chaverim of the Delaware Valley is a Philadelphia based fraternal organization of Jewish radio amateurs and their friends who support education and brotherhood through Amateur Radio.

New leaders at QCWA

Famed radio amateur Lew McCoy, W1ICP has assumed the Presidency of the Quarter Century Wireless Association. Mc Coy who is currently a Contributing Editor of CQ Magazine is best known for his years of service to the American Radio Relay League. He first hired on at League headquarters in 1949 and served as Assistant Communications Manager. In 1950 he transferred to the Technical Department where he held many titles including Technical Editor of QST Magazine. W1ICP also used his writing skills as Novice Editor to assist newly licensed hams get started in the hobby. In 1988 McCoy was named the winner of the Dayton Amateur Radio Association's Technical Excellence Award.

Companies agree to support Red Cross

In a recent press release, McCaw Cellular Communications, Inc, AT&T, and the American Red Cross have signed an agreement in which McCaw and AT&T will provide free wireless and long distance service, cellular telephones and volunteers to aid the Red Cross during times of disaster.

Sound familiar? ARRL has just signed a Memo of Understanding with Red Cross regarding emergency communication support for the disaster relief organization.

Many clubs and individuals work with the Red Cross in providing Amateur Radio support in times of emergency. Any observations you might have on the impact of this new pact between the Red Cross and AT&T would

Packet Directory

144.990 N1KBT	145.090 AA1FS	145.710 KA1THM
144.990 NS1N	145.090 K1UGM	145.710 KC1KM
145.010 Fara Digi	145.090 KC1CE	145.710 N1LDY
145.010 N1CSI	145.090 KD1NU	145.730 KC1UA
145.050 WA1ZJF	145.570 N1QWW	
145.070 WQ1O	145.530 KQ1K	

'94 SEMARA OFFICERS

President:	Pete Carreiro, KA1WOJ, 993-6262
Vice-President:	Robert Peckham, KA1YDG, 995-9137
Secretary:	Karen Peckham, N1LIE, 995-9137
Treasurer:	Pat Carreiro, KA1YUH, 993-6262
Board Members:	William M. Miller, Jr., K1IBR Bill Field, WA1FYF Linda Medeiros, KA1QCO
Trustees:	Bill Field, WA1FYF Morris Fogaren, WB1GJO Joe Midurski, W1EKW Edward Blouin, KA1AW Andrew Reuter, WA1FNM
Buildings/Grounds:	Bill Field, WA1FYF, Chairman
Technical:	William M. Miller, Jr., K1IBR, Chairman
Ways & Means:	Pat Carreiro, KA1YUH, Chairman

be valuable in assessing our role and effectiveness in future emergency communications activities.

W3EP wins QST cover plaque award

Emil Pocock's, W3EP, article "144-Mhz Sporadic E" was chosen by the ARRL Board of Directors as the winner of the July 1994 QST cover plaque award. Emil is a frequent contributor to QST and has provided a wealth of technical information and education to Amateurs over the years.

ARRL at IARU Region 3 Meeting

Region 3 of the International Amateur Radio Union, a federation of Amateur Radio societies worldwide, met recently in Singapore. Region 3 includes most of Asia and Oceania. (The U.S. is in Region 2.)

ARRL is the International Secretariat for IARU and we had several representatives and observers at the 5 day meeting, including International Vice President Larry Price W4RA, Executive Vice President Dave Sumner K1ZZ, and Paul Rinaldo W4RI.

There were several actions taken at the Region 3 meeting that will be of interest to US Hams:

Repeater Directory

145.150 - WA1DGW, Fall River	442.350+ N1QWW, New Bedford
145.490 - KA1WBF, Fairhaven	443.450+ K1MYL, Westport
146.700 - WA1RBT, Cranston	443.600+ NS1N, Norwell
146.655 - WA1GPO, Falmouth	443.800+ N1RFH, New Bedford
146.685 - N1OEG, Plymouth	444.250+ WA1GPO, Falmouth
147.000+ W1AEC, S. Dartmouth	444.350+ W1ACT, Fall River
147.045+ WA1AIC, Yarmouth	444.550+ WA1ZJF, Bridgewater
147.135+ ND1N, Taunton	446.325 - KA1CLX, Plymouth
147.180+ WB1FLD, Bridgewater	446.625 - NC1K, Plymouth
147.315+ N1BBT, Wareham	447.075 - N1DZD, Kingston
	448.675 - N1FFH, W. Greenwich
441.400+ WG1U, Assonet	
442.200+ NY1D, Fall River	

Know of any local repeater frequencies not listed here? Send them in to the editor!

1. Region 3 endorsed the concept of an International Amateur Radio Permit for short-term visitors, as we are pursuing with Region 2. When implemented, this permit would allow visitors to a country to operate without need to make special licensing arrangements.

2. Guidelines for packet radio operators and packet BBS operators were updated.

3. The Phase 3D satellite program was endorsed, and member-societies were urged to find ways and means to collect private and other donations. The Phase 3D program, which promises to open satellite operation to most Amateur operators with simple equipment is two years from launch.

4. The Region 3 conference supported the continuation of the existing Morse Code requirement for operation below 30 Mhz. With all the discussion about the future of CW, both nationally and internationally, this is an interesting result. This issue will be watched carefully in upcoming IARU meetings and committee reports.

FCC moving

The FCC's Washington D.C. headquarters will be relocating to southwest Washington D.C. after all. An agreement between the U.S. government's General Services Administration and an office complex called "The Portals" has been reinstated by an appeals court. The justices ruled that the GSA had improperly terminated an agreement to lease space in 1991 after the FCC decided it did not want to make the move. The commission argued that the leased space was inadequate for future needs and that it did not want to leave the downtown Washington area which they say is more conducive to FCC operations. As a result of the court decision, the GSA has re-signed the lease with "The Portals" and plans to move the FCC to the new location before the end of the century.

Cable Television system shutdown

The FCC has partially shut down a cable television system for excessive leakage. It happened in Oklahoma where an engineer working out of the Dallas, Texas office discovered that a small town cable television system had a signal leak on aeronautical frequencies.

The FCC identifies the cable system as Trans-Western Video of Waukomis, Oklahoma. The FCC says it measured a cable leak of 1,850 microvolts per meter where the FCC rules permit a maximum of 20 microvolts per meter.

As a result of this leak, and several smaller ones, the system was found to violate the cumulative leakage

index limit. This called for suspension of operation on all aeronautical frequencies to prevent interference with aviation communications.

Radio Shack Expands

Tandy Radio Shack is planning a substantial expansion of its retail outlets. According to Wall Street Business News reports, the company expects to open 500 new stores by the end of the century. That will give Radio Shack a total of seven-thousand franchised and company-owned stores. It's also planning to open 24 new Computer City outlets in 1995.

Not in the press release but widely rumored is a major expansion in Radio Shack's highly successful line of ham radio gear early next year.

U.K. Repeaters

From across the Atlantic comes word that several new repeaters are coming on the air in the United Kingdom. That is, they will eventually be on the air.

The Radio Society of Great Britain reports that the latest batch of repeater applications have been forwarded to the United Kingdom's Radio Communications Agency for processing. Included are three new Packet Radio repeaters, a 24 cm ATV repeater a two meter repeater and a change of frequency for another 24 cm ATV system.

The RSGB says that it anticipates the minimum time for clearance of the UHF repeaters will be at least six months or longer.

Technician Grandfathers

If you hold a Technician class ham license issued prior to March 16, 1991 then you are automatically a Technician Plus licensee. The only problem is that the FCC's computer may not have taken note of this since June.

The FCC now admits that in some instances since last June the 8th, it has processed a license renewals and modification for some Technician Plus licensees and

Net Directory

Sun	8am	14.262	General	M-F	8pm	145.490+	Weather
Sat	8am	7.237	UFO	Tue	8pm	3.978	UFO
M-F	8am	28.375	General	Thu	8pm	147.180+	Trivia
Sun	3pm	28.470	UFO	Sat	1800G	14.300	Cst Grd
Daily	7pm	146.55	General	Please report any regularly scheduled nets to the editor!			
Thu	7pm	14.264	UFO				
Sat	7:30p	3.978	UFO				

Brain Teaser

CKCAHSOIDARCKCWEJXPX
RSLOOTNESNEJXERLETE
IBCLPHIZTRWULLRCFWK
HWZPAODKOMOUSERELEC
QAYPTSLLNZTTTCYPNSSV
PLMXFEAEOEAXSWEDWRUD
ALGRLVPJMZEUKLHELLO
REAFAOVITAIMRSVXGOR
SNRKMDRSNGRMLOVEISP
EUMEILJTECTICMLLENM
CSYARRADNALTURRPHOO
CANONGISGOSSETSAOLCC
OEMQQWHSRUCKVTRREIO
MAYUWLIEDENOTJVBLLV
MDETIMILFRVHRQGI EID
SKROWOIDARGICCMVCSX
PTYNCGCOWIFONMIFIAA
HMSQAKFLRFZYDUTMSFM
JZEKLI XWECIDYXEELZN

Makers of Ham Equipment

GIEHL-ELEC	RUTLAND-ARRAYS	HAMRAD
SIGN-ON	JENSEN-TOOLS	SILICON-SOLUKAG
L-DUSTCOVERS	STONE-MTN-ENGR	MICRO-CONTROL
SUMMITTEK	MOSLEY-ELEC	TELREX
MOUSER-ELEC	TEP-INC	N-C-G-CO
TRI-EX-TOWER	PARSEC-COMM	UNIVERSAL-MFG
POLOMAR	VALOR	R-F-LIMITED
VIBROPLEX	RADIO-SHACK	VOCOM-PROD
RADIO-WORKS	WALLEN-USA	ROHN
WRIGHTTAPES		

has mistakenly issued them entry level no-code Technician tickets.

Tech Plus licensees who sent in a renewal or modification after June 8th can immediately tell if they have an incorrect license simply by looking at it. If it was issued after that date it will be marked Technician Plus. If it isn't, then you are going to have to contact the FCC and get it corrected.

The FCC says that you can continue to exercise your Technician Plus privileges until your new license arrives.

Congress Supports Hams

A joint congressional resolution supporting Amateur Radio was successfully passed through both houses of Congress the morning of October 7. The bill asks for "reasonable accommodation" in the operation of Amateur Radio in homes, automobiles and public places.

Packet Symposium

The 1995 TRISAP Packet Symposium will be held on Feb 5, 1995 at the Marina Inn, South Sioux City, NE from 9:00 am to 4:00 pm. If you have programs you wish to present, or you want more information, contact NF0N @ NF0N.NE.USA.NA

No Elderly Exemption

The FCC says no to a petition that proposed exemptions from Morse code exams for people age 65 and older.

The petition to change the rules was filed by Guy A. Matzinger, KB7PNQ. Matzinger is a 67-year-old Technician class licensee from Cheney, Washington. In his petition Matzinger argued that old age results in diminished faculties. He even equated people 65 and older with the severely disabled in terms of passing a CW exam.

Space Briefs

LUSAT-OSCAR-19

After a three month period, the file server on the LUSAT-OSCAR-19 satellite is back in operation. The file server had been out of service since the spacecraft's on-board computer crashed last May for unknown reasons while it was over the South Atlantic Anomaly.

FUJI-OSCAR-20

The FO-20 command team mentioned that digital mode operation of the bird will be continued for a while because mode switching between digital mode and analog mode may cause a problem with the onboard command system.

ITAMSAT-OSCAR-26

After 40 days of idle time, the ITAMSAT spacecraft was switched on by ground command and a full spacecraft checkout was performed by the control team. IO-26 was found to be in excellent shape with the battery fully charged and all critical parameters in a nominal state. Several pieces of test software were loaded and executed without any problem.

The reason for the delay in bringing IO-26 back on the air was due to the heavy workload of the con-



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trol team. Alberto, I2KBD spent some time in Chile helping the CESAR team, and lightning destroyed the main command station.

MIR EVA Coverage

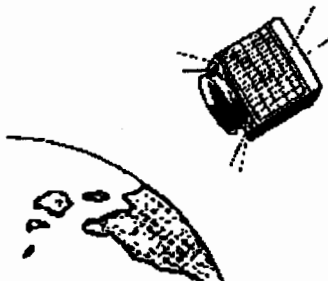
John, G7MIZ, in England reports watching live pictures of the latest extravehicular activity outside the Russian space station Mir on the morning of 13-Sep-94 at 0630 UTC on the COSMOS 2054 satellite, 10,820 MHz, located at 15 degrees west longitude. Other noted frequencies were 10,925 MHz, and 11,385 MHz. Peak signal times were 0600 and 1800 UTC.

MACHOLTZ-2

Astronomers are keeping a watchful eye on Machholtz-2, a comet discovered to be racing toward the Sun by an American scientist last month. Shortly after the comet was discovered, observers reported the comet had broken up in a manner similar to comet Shoemaker-Levy-9 before its impact with Jupiter in July, and there is some concern the fragments of comet Machholtz-2 could impact the Earth in the future. Five fragments have been spotted so far, and all are heading for Earth's orbit. However, astronomers warn it is extremely difficult to predict the long-term behavior of the comet fragments and advise the comet will be monitored closely.

NOAA-11 failure

Reliable sources report that NOAA-11's AVHRR failed at 23:30 UTC on 13-Sep-94. A brief report indicated that the fault appeared to be electrical. NESDIS personnel have been working diligently to solve the problem, but it seems that APT as well as high resolution images are no longer available from NOAA-11 because of this failure.



AO-21/RS-14 goes silent

A "Total Shutdown" of the amateur radio payload AO-21 (including the CW-beacon on 145.818 MHz) on the main spacecraft INFORMATOR 1 occurred between 94-10-12 15:00 UTC and 94-10-13 11:42 UTC. Any telemetry captured during this interval would be very helpful in trying to determine the reason for the shutdown. Telemetry reports should be directed to the AO-21 spacecraft controllers: via PACKET to Robert, DD4YR @DB0AAB.#BAY.DEU.EU, or via INTERNET to Peter, db2os@amsat.org

NASA News via E-Mail

NASA press releases and other information are available automatically by sending an Internet electronic mail message to domo@hq.nasa.gov. In the body of the message (not the subject line) users should type the words "subscribe press-release" (no quotes). The system will reply with a confirmation via E-mail of each subscription. A second automatic message will include additional information on the service. Questions should be directed to (202) 358-4043.

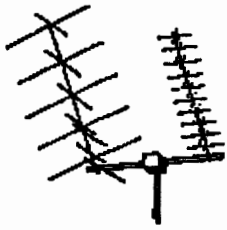
International Symposium

The SpaceOps '94 International Symposium sponsored by the NASA/Goddard Space Flight Center (GSFC) will be held on November 15-18, 1994 at the Greenbelt Marriott Hotel in Greenbelt, Maryland.

The theme for the SpaceOps '94 is opportunities in ground data systems for high efficiency operations of space missions. Of special interest are techniques leading to improved system productivity, effectiveness, and efficiency; trade-offs between mission requirements and end-to-end system architectures; and new technologies and techniques for systems suited to future space missions.

The SpaceOps '94 will serve as a vehicle for communicating results and plans concerning present and future operations of space missions and ground systems. It generally attracts 400 specialists from many countries who take this opportunity to share their experience and knowledge with others engaged in similar activities.

For more information, please contact: Laura Capella, Conference Coordinator, Jorge Scientific Corporation, Suite 1130, 7500 Greenway Center Drive, Greenbelt, MD 20771. E-mail: spaceops@kong.gsfc.nasa.gov



Is it true what they say?

Is it true, as some publications say, that "...RACES operation is authorized by the FCC at the request of a state or federal official, and this operation is strictly limited to official civil preparedness activity in the event of an emergency communications situation."?

Response. No. Neither state or federal officials request the FCC to authorize the use of the RACES; and the operation is not so limited as implied.

RACES operation is authorized any time activation is requested by the local or state official with that authority as specified in the jurisdiction's RACES plan.

The FCC regulations authorize the RACES as a service for state and local government, but beyond that no other action is required. RACES is for their needs, and they determine its use and need, not the FCC or FEMA. They do not request that the FCC authorize its use. The only time that a local or state request might be made to the FCC is in the very isolated instance asking for a declaration to RESTRICT AMATEURS FROM NORMAL OPERATIONS during a specific emergency. This is so rare that the FCC routinely turns down the sporadic requests.

As to being "limited to official civil preparedness activity....", such statements seem to echo words in Part 97.407(e) and do convey the idea that RACES activities are much more limited than some other service supposedly without limitation. However, in the real world, a government emergency communications unit can do most activities any other unit can do if so authorized and properly handled, by its sponsoring government civil defense agency for training and familiarization purposes in preparation for emergency communications. The key is how the situation is handled and structured.

Remember, however, that the RACES prime mission is emergency Public Safety Communications support for and on behalf of the local or state government civil defense program. In today's world that includes many activities that do not involve operation on Amateur Radio frequencies.

Ham Files Online

Many amateur radio oriented files and programs are available online at Dreamer's Online! 508-991-6058. New files come in weekly and contain news, reports,

bulletins, and programs such as log managers, radio control, electronic calculations, packet, scanning, shortwave and more.

Some areas are available on your first call. Leave a message with your call sign when you log on, and your access will be upgraded within 48 hours. Also available online are genealogy, survival, emergency management, windows and handicapped.

More Code

C.W. More-Scode

There's been a lot of talk about the licensing code requirement. Some would have it dropped totally, and others would like to see a reduction in the words per minute for the Extra and General class licenses.

In a refreshing note, there is a movement to INCREASE the code requirements. A group in Rhode Island is putting together a proposal to present to the FCC in early January. The proposal would request that the 5 WPM requirement for Novice be maintained, that the requirement for General be raised to 15 WPM, and that the requirement for Extra be raised to 25 WPM. In addition, it would add a 20 WPM requirement for Advanced class.

Under discussion is adding a CW retest requirement at each renewal anniversary.

Apparently, the movement is gaining momentum and support, especially from CW lovers around the country. To add your support, call 1-900-CW-LOVERS. Each cost cost \$50, which funds the groups efforts.

TRANSMISSION LINE LOSS TABLE FOR COAXIAL LINE

(all values are DB per 100 feet)

Cable type RG/U	Frequency in MHZ						
	10	50	100	200	400	1000	3000
6A	.04	1.90	2.70	4.10	5.90	9.80	23.00
8,8A,213	.55	1.30	1.90	2.70	4.10	8.00	16.00
Belden 9913		.64	1.00	1.60	2.50	4.50	
Belden 9914		1.10	1.60	2.40	3.50	6.00	
Belden 9888	.60	1.20	1.70	2.70	4.20	7.80	14.20
Belden 8214	.60	1.20	1.70	2.70	4.20	7.70	14.20
8X	1.10	2.50	3.70	5.40	8.00	13.50	26.00
9,9A,9B,214	.66	1.50	2.30	3.30	5.00	8.80	18.00
11,11A	.66	1.60	2.30	3.30	4.80	7.80	16.50
14,14A,217	.41	1.00	1.40	2.00	3.10	5.50	12.40
218,219	.24	.62	.95	1.50	2.40	4.40	9.50
Belden 9915		.60	.80	1.20	1.90	3.50	
34,34B	.32	.85	1.40	2.10	3.30	5.80	16.00
55B,223	1.20	3.20	4.80	7.00	10.00	16.50	30.50
58	1.25	3.15	4.60	6.90	10.50	17.50	37.50
58A,58C	1.40	3.30	4.90	7.40	12.00	24.00	54.00
59,59B	1.10	2.40	3.40	4.90	7.00	12.00	26.50
62,62A	.85	1.90	2.70	3.80	5.30	8.70	18.50

VE EXAMS

		November	
20:	Shirley, MA	Tom, 508-425-6672*	
23:	Cambridge, MA	Nick, 617-253-3776	
26:	Slatersville, RI	Bob, 401-333-2129	
		December	
3:	Middletown, RI	Jack, 401-683-2250	
4:	Shirley, MA	Tom, 508-425-6672*	
5:	Cambridge, MA	Bob, 617-593-1955	
7:	Acton, MA	Dave, 508-263-3712*	
8:	Providence, RI	Judy, 401-231-9156	
10:	Braintree, MA	William, 617-843-4400	
10:	Marlborough, MA	Bill, 617-891-9079	
10:	Stoughton, MA	Bob, 508-583-3639	
10:	Falmouth, MA	Geoffrey, 508-548-0969	
10:	Brewster, MA	Henry, 508-255-2818	
11:	Gloucester, MA	Rick, 508-283-2278	
14:	Billerica, MA	Bruce, 508-851-2886	
17:	Melrose, MA	Scott, 617-322-7654	
18:	Shirley, MA	Tom, 508-425-6672*	
18:	Athol, MA	John, 508-249-5905	
21:	Cambridge, MA	Nick, 617-253-3776	
21:	Lunenburg, MA	Tom, 508-534-9377*	
23:	Holyoke, MA	Jim, 413-245-3228	
31:	Slatersville, RI	Bob, 401-333-2129	
		January	
1:	Shirley, MA	Tom, 508-425-6672*	
2:	Cambridge, MA	Bob, 617-593-1955	
4:	Acton, MA	Dave, 508-263-3712*	
7:	S. Dartmouth, MA	Ray, 508-995-0334	
8:	Gloucester, MA	Rick, 508-283-2278	
11:	Billerica, MA	Bruce, 508-851-2886	
12:	Providence, RI	Judy, 401-231-9156	
14:	Falmouth, MA	Geoffrey, 508-548-0969	
14:	Chicopee, MA	Jim, 413-245-3228	

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VE EXAMS (Continued)

14:	Marlborough, MA	Bill, 617-891-9079
15:	Shirley, MA	Tom, 508-425-6672*
18:	Cambridge, MA	Nick, 617-253-3776
18:	Lunenburg, MA	Tom, 508-534-9377*
21:	Melrose, MA	Scott, 617-322-7654

CALENDAR

	December		April
1:	7:30p, SEMARA Meeting	6:	7:30p, SEMARA Meeting
10:	SEMARA Christmas Party	9:	Ham Fest, Framingham
11:	Ham Fest, Fall River	16:	MIT Flea, Cambridge
	January	28-30:	Dayton, OH
5:	7:30p, SEMARA Meeting		May
	February	4:	7:30p, SEMARA Meeting
2:	7:30p, SEMARA Meeting	12-13:	Hoss Traders, NH
	March	20:	Flea, Forestdale RI
2:	7:30p, SEMARA Meeting	21:	MIT Flea, Cambridge
3-5:	TAPR Annual Meeting		

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