



MEGAHERTZ TIMES

December 2024

W3AI

PO Box 336, Perkasio, PA 18944

R F Hill Amateur Radio Club 2024

President: Cary Binder, NI2Q
Vice President: Jim Soete, WA3YLQ
Secretary: Jim Reed, KC3LXV
Treasurer: Tom Dumire, K3KKI
News Editor: KS3Z, Charles Schmill
ks3z@comcast.net

CLUB INFORMATION

Mailing address:
PO Box 336, Perkasio, PA 18944
Club Repeaters: 145.31 MHz; input
144.71 MHz PL 131.8 (2 meters)
444.75 MHz, input 449.75 MHz PL 103.5
(70 cm)

Meetings: The club normally meets at
7:30 PM on the last Thursday of the
Month

Web page: <http://www.rfhillarc.club>

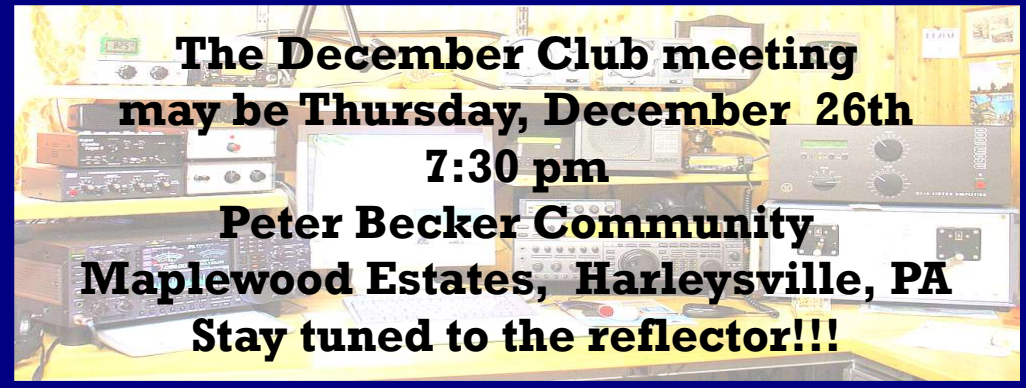
Email: rfhillarc@yahoo.com

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DEADLINE for article submission is 6
days before the meeting! Please submit
in Open Office (.odt) or MS Word (.docx)
format. No PDFs please!

Send to ks3z@comcast.net



**The December Club meeting
may be Thursday, December 26th
7:30 pm
Peter Becker Community
Maplewood Estates, Harleysville, PA
Stay tuned to the reflector!!!**

Note: as of press time, the President has not
made a determination as to whether the meeting
will be held, due to the great number of
members visiting, or receiving visitors during
the Holidays.

**If meeting is cancelled, members are
encouraged to check in on the 145.31 repeater
at 7:30 for a roundtable net.**

Tenative December Program

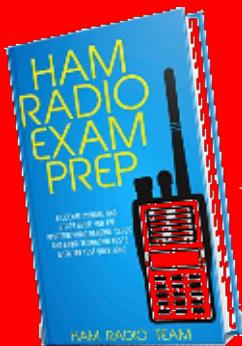
**An American Tradition:
The Train Under the Christmas Tree”**

Featuring a photo gallery of
O, S and HO Gauge Layouts
A discussion of Early Train Control
A Demonstration Of Digital Command Control (DCC)

Also

It is Leftover Christmas Cookie Nite. Bring a plate to share.

VE TESTING



VE testing for Technician, General and Extra Class licenses is held at 6:00 PM at the Indian Valley Public Library in Telford:

100 E Church Ave.
Telford, PA 18969



Scheduled VE Exam Sessions

2025 Dates:

January 20
March 17
May 19
July 21
September 15
at Hamfest in October
November 17

Direct questions to Kevin KW3P at kw3p@arrl.net or by cell phone at 215-378-6978.

SEPPATN Net Control Stations

12/29 WA3YLQ	02/26 KW3P
01/05 WA3YLQ	02/02 KB3DEN
01/08 KW3P	03/05 KB3DEN
01/12 WA3YLQ	03/09 WA3YLQ
01/15 KW3P	03/12 KW3P
01/19 KB3DEN	03/16 WA3YLQ
01/22 KB3DEN	03/19 KW3P
01/26 WA3YLQ	03/23 KB3DEN
01/29 KW3P	03/26 KB3DEN
02/02 WA3YLQ	03/30 WA3YLQ
02/05 KW3P	04/02 KW3P
02/09 KB3DEN	
02/12 KB3DEN	
02/16 WA3YLQ	
02/19 KW3P	
02/23 WA3YLQ	

Contact Jim KB3DEN with any questions or conflicts. If at the last minute, the assigned net control station doesn't show-up, any net control station on frequency should run the net.

Thanks to everyone for your continued support.
Jim – KB3DEN KB3DEN@aol.com



Club Nets

SEPPTN traffic nets are on Sundays & Wednesdays at 8:00 PM local time at 145.310

MHz (-600). These nets are for anyone who would like to learn how to handle traffic as well as an on the air meeting place for members and future members.

RF Hill A-R-C Ten Meter AM Net: 29.005MHz on Sunday evening immediately following the SEPPTN

RF Hill CW Squad Operates on 28.370.600 CW at approx. 7pm Tuesday stopping before the NPARC net at 8pm. This is a non formal CW - slow speed - net for beginners and ranges in speed from 5-15 wpm.

AREA NET LISTINGS

SEPPTN Southeastern PA Practice & Traffic Net	Su/W	8 PM	145.31-
EPAEPTN - EPA Emergency Phone/Traffic Net	Daily	5 PM	3.918 +/-
Pennsylvania Traffic Net (CW)	Daily	7,10 PM	3.585
Third Region Net	Daily	4 PM	7.243 (3.917 -alt)
Eastern Area Net (EAN)	Daily	2:30 PM	7.243
Bucks County ARES	W	9 PM	147.090+
Montgomery County ARES	Th	7 PM	146.835- (pl 88.5)



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Join the conversation.

Follow us today!

<http://facebook.com/rfhillarc>

<http://twitter.com/W3AI>



RF Hill SEPPATN November Report

QNI = 68

QTC = 1

In 8 Sessions

That's a little over 8 Check-in's per session.

Net control stations needed!

Please contact Jim, KB3DEN or an officer for information.

RF Hill Volunteer Examiner Team

RF Hill ARC sponsors VE sessions 6 times per year at the **Indian Valley Public Library**—Church Rd near County Line Road, Telford on odd months, the third Monday evening at 6:00 pm.

See page 2 for dates. **Next session is January 20, 2025.**

Kevin is looking for VE's interested in helping out at the exam sessions. He is getting only about three VE's helping on a regular basis, and more VE's would be a help. Contact us if you need help in gaining VE certification.

Thank you!

Kevin Woolard, KW3P, Secretary, ARCC, VE Liaison RF Hill ARC

2025 Dues Are Now Due

E-Mail _____ Phone # _____

License Class _____ ARRL Member YES No

ARES/RACES Member ? YES NO

My Contact info may be shared with MYour dues payment is expected no later than the January meeting. Please fill out this form and return it with your payment at a Club meeting or by mail: RF Hill ARC PO Box 336 Perkasio, PA 18944. The 2025 dues rates are **\$25.00** per year for regular membership, and **\$12.50** for Retired members and students. No dues required for Life Members.

Name _____ Call Sign _____

CIRCLE DUES PAID: \$25.00 \$12.50 Life Member

CHECK : _____ No Changes to my info.

(do not go further)

***** ONLY COMPLETE THIS FORM BELOW IF YOU WISH TO INDICATE CHANGES TO YOUR PERSONAL INFO. *****

MEMBERS YES NO

Note: Your Call Book/ULS address will be considered your address of record.

OPTIONAL DONATION to support the W3AI Repeater and Club operations. Amount enclosed \$ _____ .

RF Hill ARC November Meeting Minutes

Meeting Date- November 21st, 2024

Welcome/Call to Order- Vice President Jim WA3YLQ called the meeting to order at 7:30pm.

Fourteen members were present along with four new applicants. Bob Harcarik WA2POW, Joseph Johnson KC3ZPY, Jack Unger N3ANZ and Tyler Smith KD3AAC.

President- Cary NI2Q was unable to attend the meeting.

Vice President- Jim WA3YLQ discussed the upcoming December meeting program. Jim asked members for photo's of their past or present model railroad layouts. Jim and his grandson will make a presentation on Digital Command Control (DCC) for HO trains.

Jim also discussed the upcoming election of officers. Nominations take place at the December meeting. Please consider an active position with your club. It is also cookie night. Bring your favorite holiday cookies.

Secretary- A motion was made by Ned WQ3Z with a second from Charles KS3Z to approve the October minutes as published in the MHz Times.

Jim KC3LXV reported on membership renewals with ten members having paid their dues to date. The second reading took place for new applicants, Bob Harcarik WA2POW, Joseph Johnson KC3ZPY, Jank Unger N3ANZ and Tyler Smith KD3AAC. All four applicants were voted in unanimously.

Treasurer- Tom K3KKI was unable to attend the meeting.

Committee Reports- Repeater- Charles KS3Z is looking into a lead on a repeater antenna that is for sale.

MhzTimes- Charles KS3Z is always looking for articles for our newsletter.

VE Session- Kevin KW3P reported one person attended and passed their test at the most recent session.

Old Business- None

New Business- Tom Nolan W3EX spoke about the new ham radio station that the Peter Becker Community (K3PBC) has agreed to set up. Tom will donate his equipment and tower for this project. Construction is under way. Tom will need our help in the setup of the equipment.

Steve K3ALV suggested to place Irv Fishers AF3IF (SK) 6 meter vertical antenna on the tower.

Tom and his wife will move to Peter Becker in January of 2025.

Lloyd W3LMR requested that the club make a holiday donation to FISH. The board will discuss the request their next meeting.

Adjournment- 7:59pm.

Respectfully submitted,
Jim Reed, Secretary
KC3LXV

Club member auction followed

MCARS News

MCAR Hosts ARRL Section and Divisional Leadership, RF Hill ARC Represented

By Robert Alan Griffiths NE3I EPA PIC

Montgomery County ARES RACES (“MCAR”), hosted ARRL Eastern Pennsylvania Section (“EPA”) and Atlantic Division Leadership at its November monthly meeting. MCAR Emergency Coordinator Chuck W3AFV introduced the guests. RF Hill ARC members in attendance were, Tom, W3EX, Ned WQ3Z, John WB3ABH and Griff NE3I

EPA Section Emergency Coordinator (“SEC”) Jay W2AFE, summarized this past year’s section exercise and Simulated Emergency Test. He complimented the ARES and Red Cross Operators who participated from 19 Pennsylvania counties. Jay went on to announce an upcoming Red Cross exercise contemplated to occur in the Spring. Following Jay, EPA Section Manager Bob W3BIG, expressed his pride in ARES units and went on to stress that “Emergency Communications is one of the most important things that we do.” He explained that ARES Operators have the capability to go “off grid” and provide emergency communications. He complimented MCAR efforts and encouraged participation in local clubs as a way to increase involvement. The third guest up was ARRL Atlantic Division Director Bob K3RF. Bob reviewed how the ARRL structure and organizational policies are designed to benefit Amateur Radio. A member of the ARRL’s ARES and Legal Defense Committees, he reiterated that “Our highest calling is Emergency Communications activities. Emergency Communications is why we exist.” Bob went on to relate that Amateur Radio Operators are recognized as having an important role by FEMA and state and local government entities involved in Public Safety. Forty two (42) Radio Amateurs attended the meeting in person or via Zoom.



Left to right, EPA SEC Jay W2AFE, EPA SM Bob W3BIG,
ARRL Atlantic Division Director Bob K3RF,
MCAR Radio Officer and EPA DEC Dick, K3ITH and
MCAR EC Chuck, W3AFV

NE3I Photo



Bob suddenly realized his wife had fallen off her horse, which was quite a relief to him as just an hour earlier he thought he'd gone deaf.



Trevor White | | CartoonStock.com

Load freight on your own railroad . . .
throw open the throttle
and let 'er roll!

27.97
(4)

19.97
(3)

14.77
(2)

9.88
(1)

5
398

(1) MAREX "CHUG CHUG" Train hustles around the 80-in. track! Engines actually "chug," as it pulls tender, gondola car, hopper car and caboose (overall 38-in.). Starting railroad layout has 8 pieces of .027 gauge track. Hi-impact plastic. 2SW variable speed transformer. Mail. (7 lb.) R36 J 5257, 5 units. Set 9.88

Basic layout

(2) LIONEL "HEADLIGHT" Train . . . great fun for just for engineers! Steam locomotive moves forward or back—carries a big peep-toed slope-back tender, gondola car, hopper car and caboose. Cars couple automatically. Hi-impact plastic. 10 pcs. of .027 gauge track. UL listed 3SW transformer with circuit breaker. Mail. (8 lbs.) R36 J 5258, 5 units. Set 14.77

Oval layout

(3) LIONEL "ACTION" Train has remote control dump car! Steam locomotive with headlight pulls slope-back tender, log car, box car, hopper and caboose—backs up, too. Cars couple automatically. 21 pcs. of .027 gauge track. UL listed 4SW transformer; circuit breaker. 3 hi-boards. Hi-impact plastic. Mailable. (11 lb.) R36 J 5259, 6 units. Set 19.97

Figure "8" layout

(4) LIONEL TWIN DIESEL Train barrels down the line at high speed! Mighty Santa Fe twin diesel engines pull one 5 1/2-ft. of cars forward or back—headlight scans track ahead. Box car, gondola, tank car, hopper and caboose have automatic couplers. Hi-impact plastic. 21 pcs. of .027 gauge track. UL listed 6SW transformer, circuit breaker. Mail. (14 lb.) R36 J 5260, 7 units. Set 27.97

Figure "8" layout

(5) TRANSFORMER. Speed control; circuit breaker. UL listed. AC only. For all trains but HO. 150W. Mail. (11 lb.) R36 J 5213. . . 11.99
100W. (8 lbs.) R36 J 5211. . . 7.99

(6) TRACK Sections by Lionel. Nickel-plated steel, .027 gauge; 3 ties per section. (14 oz. ea.) Straight. 8 1/2-in. 35 J 5254. . . Ea. 19¢
Curved. 9 1/2-in. long. 35 J 5265. . . Ea. 19¢

(7) PKG. OF 2 Switches. Remote control for left, right turns. Control lights; insulated rails. For Lionel .027 gauge. (3 lbs. 12 oz.) 35 J 5268. . . Pkg. 13.95
Manual Switches. 35 J 5269. . . Pkg. 5.94

(8) BANG! SIGNAL works just like a real one! As train approaches, red light flashes and "Bang" arm swings back and forth. 7 1/2-in. high. Metal and plastic. (1 lb. 12 oz.) 35 J 5267. . . 4.95

New Budget Power Terms buy more for the same monthly payment!

CW vs. SSB

CW

CW signal bandwidth = 100 Hz

SSB bandwidth = 2000 Hz

Morse has much lower throughput . . . but...

Average power density

CW - 1 watt/Hz

SSB - 0.05 watts/Hz

Which leads to...

Gain = 10 * log (1.00/0.05) = 13 db!

5w CW is equivalent to 100w SSB!

SSB

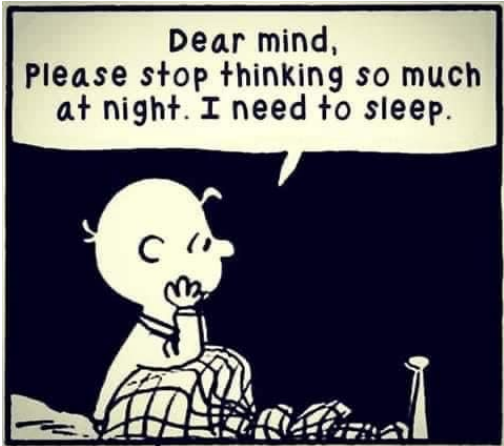
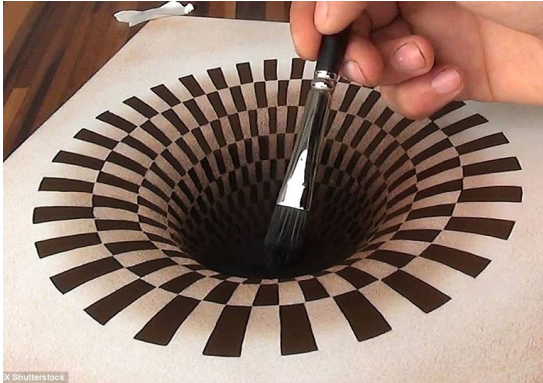
Output power = 100w

EZ Pix

Some pictures copied from EZ Pix by Lamar, K3UCI



MY PLAN FOR TODAY?
SAME AS ALWAYS.
DRINK COFFEE AND BE SEXY!



EA7B confirms image from F5UGS				
Date	UTC	Freq	Mode	SNR
11/09/2024	10:16	14.233	EZ Pix	28dB

Antonio Mesa

The Considerate Operator's Frequency Guide

The following frequencies are generally recognized for certain modes or activities (all frequencies are in MHz) during normal conditions. These are not regulations and occasionally a high level of activity, such as during a period of emergency response, DXpedition or contest, may result in stations operating outside these frequency ranges.

Nothing in the rules recognizes a net's, group's or any individual's special privilege to any specific frequency. Section 97.101(b) of the Rules states that "Each station licensee and each control operator must cooperate in selecting transmitting channels and in making the most effective use of the amateur service frequencies. No frequency will be assigned for the exclusive use of any station." No one "owns" a frequency.

It's good practice — and plain old common sense — for any operator, regardless of mode, to check to see if the frequency is in use prior to engaging operation. If you are there first, other operators should make an effort to protect you from interference to the extent possible, given that 100% interference-free operation is an unrealistic expectation in today's congested bands.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Frequencies</th> <th style="text-align: left; border-bottom: 1px solid black;">Modes/Activities</th> </tr> <tr> <td>1.800-2.000</td> <td>CW</td> </tr> <tr> <td>1.800-1.810</td> <td>Digital Modes</td> </tr> <tr> <td>1.810</td> <td>CW QRP calling frequency</td> </tr> <tr> <td>1.843-2.000</td> <td>SSB, SSTV and other wideband modes</td> </tr> <tr> <td>1.910</td> <td>SSB QRP</td> </tr> <tr> <td>1.995-2.000</td> <td>Experimental</td> </tr> <tr> <td>1.999-2.000</td> <td>Beacons</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>3.500-3.510</td> <td>CW DX window</td> </tr> <tr> <td>3.560</td> <td>QRP CW calling frequency</td> </tr> <tr> <td>3.570-3.600</td> <td>RTTY/Data</td> </tr> <tr> <td>3.585-3.600</td> <td>Automatically controlled data stations</td> </tr> <tr> <td>3.590</td> <td>RTTY/Data DX</td> </tr> <tr> <td>3.790-3.800</td> <td>DX window</td> </tr> <tr> <td>3.845</td> <td>SSTV</td> </tr> <tr> <td>3.885</td> <td>AM calling frequency</td> </tr> <tr> <td>3.985</td> <td>QRP SSB calling frequency</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>7.030</td> <td>QRP CW calling frequency</td> </tr> <tr> <td>7.040</td> <td>RTTY/Data DX</td> </tr> <tr> <td>7.070-7.125</td> <td>RTTY/Data</td> </tr> <tr> <td>7.100-7.105</td> <td>Automatically controlled data stations</td> </tr> <tr> <td>7.171</td> <td>SSTV</td> </tr> <tr> <td>7.173</td> <td>D-SSTV</td> </tr> <tr> <td>7.285</td> <td>QRP SSB calling frequency</td> </tr> <tr> <td>7.290</td> <td>AM calling frequency</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>10.130-10.140</td> <td>RTTY/Data</td> </tr> <tr> <td>10.140-10.150</td> <td>Automatically controlled data stations</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>14.060</td> <td>QRP CW calling frequency</td> </tr> <tr> <td>14.070-14.095</td> <td>RTTY/Data</td> </tr> <tr> <td>14.095-14.0995</td> <td>Automatically controlled data stations</td> </tr> <tr> <td>14.100</td> <td>IBP/NCDXF beacons</td> </tr> <tr> <td>14.1005-14.112</td> <td>Automatically controlled data stations</td> </tr> <tr> <td>14.230</td> <td>SSTV</td> </tr> </table>	Frequencies	Modes/Activities	1.800-2.000	CW	1.800-1.810	Digital Modes	1.810	CW QRP calling frequency	1.843-2.000	SSB, SSTV and other wideband modes	1.910	SSB QRP	1.995-2.000	Experimental	1.999-2.000	Beacons			3.500-3.510	CW DX window	3.560	QRP CW calling frequency	3.570-3.600	RTTY/Data	3.585-3.600	Automatically controlled data stations	3.590	RTTY/Data DX	3.790-3.800	DX window	3.845	SSTV	3.885	AM calling frequency	3.985	QRP SSB calling frequency			7.030	QRP CW calling frequency	7.040	RTTY/Data DX	7.070-7.125	RTTY/Data	7.100-7.105	Automatically controlled data stations	7.171	SSTV	7.173	D-SSTV	7.285	QRP SSB calling frequency	7.290	AM calling frequency			10.130-10.140	RTTY/Data	10.140-10.150	Automatically controlled data stations			14.060	QRP CW calling frequency	14.070-14.095	RTTY/Data	14.095-14.0995	Automatically controlled data stations	14.100	IBP/NCDXF beacons	14.1005-14.112	Automatically controlled data stations	14.230	SSTV	<table border="0" style="width: 100%;"> <tr> <th style="text-align: left; 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margin-top: 10px;">ARRL band plans for frequencies above 28.300 MHz are shown in <i>The ARRL Repeater Directory</i> and on www.arrl.org.</p>	Frequencies	Modes/Activities	14.233	D-SSTV	14.236	Digital Voice	14.285	QRP SSB calling frequency	14.286	AM calling frequency			18.100-18.105	RTTY/Data	18.105-18.110	Automatically controlled data stations	18.110	IBP/NCDXF beacons	18.162.5	Digital Voice			21.060	QRP CW calling frequency	21.070-21.110	RTTY/Data	21.090-21.100	Automatically controlled data stations	21.150	IBP/NCDXF beacons	21.340	SSTV	21.385	QRP SSB calling frequency			24.920-24.925	RTTY/Data	24.925-24.930	Automatically controlled data stations	24.930	IBP/NCDXF beacons			28.060	QRP CW calling frequency	28.070-28.120	RTTY/Data	28.120-28.189	Automatically controlled data stations	28.190-28.225	Beacons	28.200	IBP/NCDXF beacons	28.385	QRP SSB calling frequency	28.680	SSTV	29.000-29.200	AM	29.300-29.510	Satellite downlinks	29.520-29.580	Repeater inputs	29.600	FM simplex	29.620-29.680	Repeater outputs
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7.290	AM calling frequency																																																																																																																																														
10.130-10.140	RTTY/Data																																																																																																																																														
10.140-10.150	Automatically controlled data stations																																																																																																																																														
14.060	QRP CW calling frequency																																																																																																																																														
14.070-14.095	RTTY/Data																																																																																																																																														
14.095-14.0995	Automatically controlled data stations																																																																																																																																														
14.100	IBP/NCDXF beacons																																																																																																																																														
14.1005-14.112	Automatically controlled data stations																																																																																																																																														
14.230	SSTV																																																																																																																																														
Frequencies	Modes/Activities																																																																																																																																														
14.233	D-SSTV																																																																																																																																														
14.236	Digital Voice																																																																																																																																														
14.285	QRP SSB calling frequency																																																																																																																																														
14.286	AM calling frequency																																																																																																																																														
18.100-18.105	RTTY/Data																																																																																																																																														
18.105-18.110	Automatically controlled data stations																																																																																																																																														
18.110	IBP/NCDXF beacons																																																																																																																																														
18.162.5	Digital Voice																																																																																																																																														
21.060	QRP CW calling frequency																																																																																																																																														
21.070-21.110	RTTY/Data																																																																																																																																														
21.090-21.100	Automatically controlled data stations																																																																																																																																														
21.150	IBP/NCDXF beacons																																																																																																																																														
21.340	SSTV																																																																																																																																														
21.385	QRP SSB calling frequency																																																																																																																																														
24.920-24.925	RTTY/Data																																																																																																																																														
24.925-24.930	Automatically controlled data stations																																																																																																																																														
24.930	IBP/NCDXF beacons																																																																																																																																														
28.060	QRP CW calling frequency																																																																																																																																														
28.070-28.120	RTTY/Data																																																																																																																																														
28.120-28.189	Automatically controlled data stations																																																																																																																																														
28.190-28.225	Beacons																																																																																																																																														
28.200	IBP/NCDXF beacons																																																																																																																																														
28.385	QRP SSB calling frequency																																																																																																																																														
28.680	SSTV																																																																																																																																														
29.000-29.200	AM																																																																																																																																														
29.300-29.510	Satellite downlinks																																																																																																																																														
29.520-29.580	Repeater inputs																																																																																																																																														
29.600	FM simplex																																																																																																																																														
29.620-29.680	Repeater outputs																																																																																																																																														

THE AMERICAN RADIO RELAY LEAGUE

RADIOGRAM

VIA AMATEUR RADIO

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO						THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ STREET ADDRESS _____ CITY, STATE, ZIP _____	
TELEPHONE NUMBER							

REC'D	FROM	DATE	TIME	SENT	TO	DATE	TIME

THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION CAN BE ACCEPTED BY A "HAM" OPERATOR. A RETURN MESSAGE MAY BE FILED WITH THE "HAM" DELIVERING THIS MESSAGE TO YOU. FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CT 06111

THE AMERICAN RADIO RELAY LEAGUE, INC. IS THE NATIONAL MEMBERSHIP SOCIETY OF LICENSED RADIO AMATEURS AND THE PUBLISHER OF QST MAGAZINE. ONE OF ITS FUNCTIONS IS PROMOTION OF PUBLIC SERVICE COMMUNICATION AMONG AMATEUR OPERATORS. TO THAT END, THE LEAGUE HAS ORGANIZED THE NATIONAL TRAFFIC SYSTEM FOR DAILY NATIONWIDE MESSAGE HANDLING.

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