New England Spectrum Management Council

FREQUENCY COORDINATION APPLICATION v0.3

The New England Spectrum Management Council provides frequency coordination in Maine, New Hampshire, Massachusetts, and Rhode Island. Applications that are incomplete or inaccurate may be returned. The coordinator will process completed forms and a six-month test and construction coordination will be issued.

PLEASE PRINT OR TYPE

Suggested frequency pair: Output_____MHz Input_____MHz Channel Width (check one): ☐ 5KHz ☐ 2.5KHz

Application is for (check one): ☐ Repeater ☐ Link ☐ Other:_____

Date of application: Month_____ Day_____ Year_____

Applicant's Name and Call_____

Applicant's Address_____

City/Town_____ State_____ Zip_____

E-Mail Address_____

Applicant's Phones: Day_____ Eve_____

Sponsor / Group (full name) _____

Abbreviated Sponsor Name (max. 10 chars, for Repeater Directory) _____

Trustees Name & Call _____

Repeater will ID as_____

Primary Control Operator Name & Call)_____

Control Operator's Phone: Day_____ Eve_____

Exact Location of the requested coordination: Be very specific and include description of building or structure IF street address is non descriptive. (i.e.: Pinnacle Hill, Town Water tower, etc.}

Street_____ Building_____

City/Town_____ State_____ Zip_____

Site Coordinates Latitude/Longitude: :_____° _____'_____" N _____°_____'_____" W

Elevation above Mean Sea Level of site ground {AMSL}_____ feet _____

Antennas height above ground at antennas center_____feet _____

Antennas Height Above Average Terrain {AHAAT} _____ feet _____

Antenna Model # or Type, and Gain in dB _____, _____dB

Side or Top Mount?_____ If Side, what exact spacing?_____inches _____

Direction antenna will favor (due to antenna itself and/or mounting criteria)?_____deg _____

Feed line type_____ length_____ est. loss dB_____

Exact Power Output from Transmitter into Feedline _____ Watts _____

Check One: ☐ Carrier Access ☐ CTCSS ☐ DCS Frequencies or Codes used: TX_____ RX _____

Will this sytern be linked to a network?_____ Which?_____ _____

If Transmit and Receive are split site, show location of Receiver: _____

Exact Location of Structure _____

City/Town_____ State_____Zip _____

Repeater will be: ☐ open to all ☐ members only (membership is open to all amateurs) ☐ closed (membership NOT open to all) ☐ private (do not publish in repeater directory)

Have you researched frequencies we should consider?_____

Is equipment ready to be put on air?_____If not, please estimate the approximate equip.ready date_____

Unfortunately we cannot be certain that all test coordinations will work out well. It is suggested that you carefully test the proposed frequency at a radius of at least 80 miles from your proposed site BEFORE purchasing crystals. Your research is just as important as the coordinators.

SEE ACCOMPANYING INSTRUCTIONS FOR MAILING INSTRUCTIONS

QUESTIONS? Contact NESMC at questions@nesmc.org

New England Spectrum Management Council Instructions for Frequency Coordination Application

The New England Spectrum Management Council provides frequency coordination in Maine, Massachusetts, New Hampshire, and Rhode Island. Applications that are incomplete or inaccurate may be returned. Applications for new systems will be processed by the coordinator. If accepted, a six month test and construction coordination is issued. If at the end of this period satisfactory results are obtained, the coordination will convert to a full coordination. This is true unless the coordinator states otherwise. The full coordination is valid for three years. The applicant is responsible for submitting a renewal application at the end of each three year period.

Most of the form's fields are self explanatory. However, several have created questions in the past. These instructions will clarify those areas that create most of the inquiries.

Suggested frequency pair: For renewals, this field should match the current coordination. For new applications, the coordinator will assign an appropriate frequency. However, it is very helpful for the applicant to do his own research and supply a suggested frequency. The applicant should review available repeater data such as the *ARRL Repeater Directory* or the NESMC website to find candidate frequencies. These frequencies should then be monitored for a period of weeks to see if any unpublished activity is found. Once this has been done, one or two of the candidates may be included on the application.

Applicant's Name: The applicant is the person submitting the application. This field should *not* be the club name or trustee, it should be the person filling out the application, even if it is on behalf of another party. Applicant data is only be used for official NESMC business, and will not be disseminated to anyone outside of NESMC without the applicant's permission.

Application is for:

. • If the application is for a normal repeater, the transmitter and receiver are co-located and the receiver section may be left blank. . • If the application is for a split-site repeater, or for an auxiliary link, the transmitter and receiver are at different locations and both the transmitter and receiver sections must be completed. If there are multiple transmitters and receivers, all must be listed (use the reverse side of the form and use the checkbox to indicate that you have done this). . • If the application is for a control link, the receiver is centrally located and multiple transmitters most likely exist. Fill out the furthest transmitter on the front side, along with the receiver, then indicate the additional transmitters on the reverse side. Be sure to indicate you have done this with the checkbox.

Exact location of transmitter, receiver: Most often, this is a street address. However, if the location does not have a street address, please use a description. For example: Town of Berwick, ME water tower, Summit of Saddleback Mountain, Worcester Airport observation tower, etc.

Sponsor / Group: The sponsor is the sponsoring organization, which may be different from the applicant.

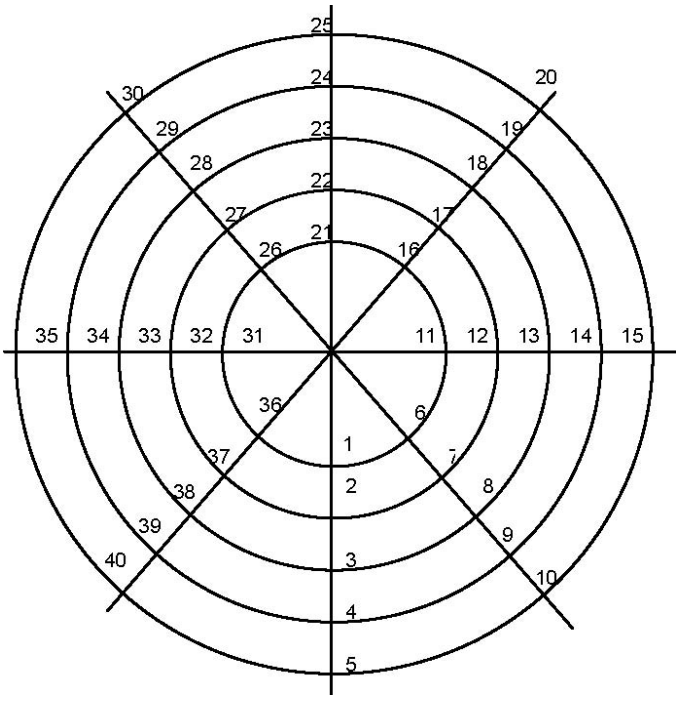
Who will have full technical control?/Control Operator: This is the person that should be contacted in case of operational problems. The phone numbers should be current and working,

as they would be used in the case of an emergency.

Site Coordinates: Please use a topographic map or software, or a GPS unit for accurate measurements.

Elevation AMSL: Use the same map or software to determine your site elevation at ground level above mean sea level (AMSL). This is the height at the ground, not the antenna supporting structure.

Antenna height above ground: This should be the height of the tower and/or building or other structure to the antenna's centerpoint of radiation.
Antenna HAAT: To get antenna height above average terrain, the average terrain height at ground level for your antenna site must be determined. HAAT is calculated by drawing eight radials out ten miles from your location. Using a topographic map or software, the elevation along these radials at two mile intervals is recorded. This will yield forty measurements (see diagram below). The average of these forth measurements is calculated, then subtracted from the sum of your site elevation plus your antenna height above ground. Antenna HAAT is *very* important in determining interference problems, so please take the time to complete this field accurately. You can also calculate HAAT online at http://www.amateur-radio.net where you will find a link to a HAAT calculator.



Exact power output from transmitter: This is the output of the transmitter before any cavity or feedline loss, and before any antenna gain.

Feedline Type: Feedlines can have a significant effect on the power delivered to your antenna. There are several website tools that allow you to select your feedline and length

and give you the loss in dB of your feedline.

Antenna Model # of Type and gain: The antenna gain of a system has a dramatic effect on the effective transmitter power level. Please indicate the model number if known, and the gain specified. For directional antennas, please indicate the compass direction of the major lobe. Side mounted omnidirectional antennas can also have directional properties, so please indicate the side mount information requested when applicable.

QUESTIONS? Contact NESMC at questions@nesmc.org

SEND COMPLETED FORMS to:

New England Spectrum Management Council
PO Box 185
Berlin, MA 01503-0185

or FAX the first page only to: (435) 578 1880