



The Texas VHF-FM Society Repeater Coordination Process

Thank you for contacting the Texas VHF-FM Society for coordination of your Amateur Radio Repeater. The Texas VHF-FM Society is the ARRL, NFCC, and FCC recognized repeater coordination body for the State of Texas. Currently Texas has over 1600 coordinated repeaters. The Society has been performing coordination activities for over 35 years with few incidents of conflicts in coordination.

The process for coordinating your repeater is very simple and is similar to the process for licensing broadcast radio stations. The attached Application for a Construction Permit is the first step.

Please fill out the form fully and return it to your Zone Frequency Coordinator (ZFC) who is listed on the Society Web Site. The ZFC will begin processing your request upon receipt of the form. You will receive word of receipt from the ZFC within 20 days of the ZFC receiving the application. If there is a problem with the issuance of the permit the ZFC will contact you by mail, email, or phone concerning the application within a 45 day period following receipt of the application. Once all information is supplied and verified, your Construction Permit for the frequency you are assigned may be issued within 45 days.

Upon issuance of the construction permit (CP), you have six months to build the system and get it on the air. If during construction you have to deviate from the issued construction permit, you MUST notify the ZFC. If more time is needed to complete construction the applicant may apply for a second Construction Permit. In order to obtain a second permit for the same frequency, the applicant must supply a written explanation of circumstances that necessitate a second Construction Permit. The application for a second permit must be received no later than 15 days after the expiration of the original Construction Permit, and no more than two consecutive permits will be issued to the same applicant.

When the repeater system is completed and on the air, as soon as possible, NOTIFY IN WRITING the ZFC that the system is operational. The ZFC will activate the coordination. You will be listed in the Society's and the ARRL repeater directories only if the coordination has been activated. The notification of the on air operation of the repeater system is the only means by which the ZFC knows the repeater system is on the air. It must be in writing for legal purposes. This is very important.

You will not receive a printed Certificate of Coordination unless requested in writing to the ZFC. Some of the ZFCs are generating pdf files that may be downloaded and printed locally. Following the initial coordination and notification process the coordination must be renewed annually. This is done when you receive the annual Renewal of Coordination form. Please check it closely for errors. Make the corrections, sign it and return to the ZFC. This protects your coordination and allows the Society to keep updated records on the repeaters and trustees. This coordination process has been carefully constructed and follows one that has worked well for years. Please help the Society continue the smooth operations of repeater coordination in Texas by adhering to this process. There is no charge for coordination services in Texas. The process is funded strictly by donations, and membership dues of Society members. Thus, we ask that you voluntarily join the Society so your dues will help fund the operations of coordination and you will have a vote in the Society's affairs. Dues are currently \$15.00 per year and \$300 for a life membership. A membership form is included in this package.

If you have any questions about the Texas VHF-FM Society, please contact your ZFC, State Frequency Coordinator, Officer or member of the Board of Directors of the Society.

**Thank you for your cooperation and
welcome to the world of repeater ownership**

Texas VHF-FM Society Membership Form



Name _____ Call _____

Address _____

City _____ St _____ Zip _____

Phone _____ Email _____

Membership Type (check one):

- New—\$15.00 Renewal—\$15.00 Club —\$15.00
 Life —\$300 Club Life —\$300 * Family Life —\$50.00

*Family member \$2.00 Name _____ Call _____

*Family member \$2.00 Name _____ Call _____

**The family & family life categories are intended for dependent family members at the same address. Family & family life categories must be accompanied by one regular membership.*

Are you currently an ARRL Member ? Yes No

If you are a repeater trustee, please list frequencies coordinated:

Please mail completed application and payment to:

**Texas VHF-FM Society
Treasurer
POB 82666
Austin, TX 78708-2666**

Thank you for supporting the Texas VHF-FM Society!



TEXAS VHF-FM SOCIETY

INSTRUCTIONS FOR CONSTRUCTION PERMIT APPLICATION

The information you supply on the attached form is very important to seeing that your construction permit is issued in a timely manner. Incomplete, inaccurate or illegible applications will delay the processing by the Zone Frequency Coordinator (ZFC).

Let's go over the application quickly before you fill out the form.

First we want some information about the Trustee for the system. This is the person responsible for its operation once on the air. Usually this is who will be filling out this construction permit form. We need all the usual information as it appears on your amateur license. The telephone numbers will be used for our internal use only so please feel free to supply private numbers as required. We need a current email address if you have one. We will try to use email as much as possible for communication with you when possible to save on costs. Are you a member of the Texas VHF FM Society ? We sure hope so, but is not required. We just need to know so we can keep the databases updated.

TRUSTEE: _____ CALL: _____ LIC EXP: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE:(h) _____ (w) _____ (fax) _____ E-mail: _____
Member of TX VHF FM Society ? YES NO

If this coordination permit will be issued to a club, please indicate the complete club name. If the repeater call sign will be different than the call of the trustee, please enter that information and indicate if this an FCC issued Club Call sign. Next please check all the sections which apply for the application you are submitting.

CLUB AFFILIATED:(YES NO) CLUB NAME: _____

REPEATER CALL:(if different than trustees) _____ CLUB CALL:(YES NO)

PURPOSE OF APPLICATION: _____ REPEATER _____ POINT TO POINT LINK _____ CONTROL FREQ IF REPEATER, SPECIFY TYPE: _____ FM _____ ATV
: _____ 10M _____ 6M _____ 2M _____ 220 _____ 440 _____ 900 _____ 1.2 OTHER: _____

This next section is one of the most important for getting your permit issued in a timely fashion and determines the coordination standards under which your application will be evaluated. The City and County where your repeater will be located is the first information which is required, followed by a physical description of the antenna location. This should be the physical address and FCC Antenna Structure Registration Number (ASR) if available. This information should be sufficient to allow someone to drive to the location. The Longitude and Latitude of the antenna site are very important and must be supplied accurately. This one item causes more difficulties in the coordination process than any other. If you are locating on a commercial tower site you can get the coordinate data from the FCC Antenna Structure Registration Number (ASR) database or other licensed users on the tower. If you are putting a tower up on your own property, you can USGS Topo Maps or a GPS receiver to give you an approximate fix for the site. The information we need must be entered in Degrees, Minutes, and Seconds using the NAD83 or WGS84 datum, as you will see on FCC issued documents. Ex: 32-45-26.1 N 96-58-11.3 W, most GPS receivers supply the information in another format which you will have to convert. If you repeater will be a split site, list the receiver location and coordinates after the transmitter information.

REPEATER CITY: _____ REPEATER COUNTY: _____ PHYSICAL DESCRIPTION OF SITE LOCATION: (If located on commercial tower site, please supply FCC Antenna Structure Registration Number (ASR))

REPEATER LAT/LON: Lat: _____ - _____ - _____ N. Lon: _____ - _____ - _____ W

You have to supply information about the height of the tower you will be using, and how high on that tower your transmit antenna will be located. The height at the base of the tower is usually listed for commercial towers in height Above Mean Sea level or AMSL. Be careful that you get the correct information. Some FCC licenses will show this information in meters not feet. Now that we know how high the base of the tower is, how far up will your transmit antenna be located above the ground. Some systems use split transmit and receive antennas and if your system does please show the height of the receive antenna separately.

HEIGHT OF TOWER BASE ABOVE MEAN SEA LEVEL: _____ (feet)

HEIGHT OF ANTENNA (s) ON TOWER (TX): _____ (RX): _____

The transmitter antenna you will be using will have specifications from the manufacturer showing the Antenna gain listed in DB and the pattern of the antenna. The pattern is normally OMNI-directional, but could be DIRECTIONAL in some special circumstances. Once you know how much gain an antenna has, we can calculate the transmitter Effective Radiated Power in watts. To do this we start with the power in watts out of the transmitter. We then subtract any loss in the duplexer and feed line to the antenna. Now we take that power and multiply by the antenna gain. Your answer is the ERP.

ANTENNA GAIN AND RADIATION PATTERN: gain (db): _____ pattern: _____

TRANSMITTER EFFECTIVE RADIATED POWER: _____ WATTS ERP
(power out of transmitter minus duplexer minus feedline loss, times antenna gain)

We are almost done. All repeaters coordinated after August 1999 must have some means to control access to help minimize interference. Most systems use some type of sub-audible tone, also known as PrivateLine® (PL). Please list the frequency you will be using, or describe other means you will use other than carrier squelch to control access to the repeater input. If you are going to be controlling this repeater using other radios, please let us know what band is desired. The society coordinates links and control frequencies too. We do not publish these link and control frequencies for security reasons. The final item is the information we will need when listing your repeater in the ARRL repeater directory. Only 11 letters are allowed to be listed. See the ARRL repeater directory for examples of what the listings look like.

PL/CTCSS _____ required for all new applications after Aug 1, 1999. PL or some other controlled access other than Carrier squelch must be used.

ARE LINK AND CONTROL FREQUENCIES NEEDED?: (YES NO) BAND DESIRED: _____

MEANS TO CONTROL ACCESS: _____ If using tone please list: _____

NOTES ABOUT REPEATER (open/closed, autopatch, tone (list tone), etc. See ARRL Repeater Directory for examples of notes. Limit 11 letters.) _____

Well that's it, double check your entries on the sheet, sign your signature, and send by US MAIL to your Zone Frequency Coordinator who is listed on the Society's web site: <http://www.txvhfm.org/FreqCoord.htm>

Please make sure that you include your email address!

APPLICATION FOR AMATEUR RADIO REPEATER SYSTEM CONSTRUCTION PERMIT



TRUSTEE: _____ CALL: _____ LIC EXP: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE:(h) _____ (w) _____ (fax) _____

E-mail: _____ Member of TX VHF FM Society YES NO?

COORDINATION TYPE: INDIVIDUAL COORDINATION CLUB COORDINATION

IF CLUB COORDINATED, PLEASE LIST CLUB NAME: _____ (11 letters)

REPEATER CALL:(if different than trustee's) _____ IS THIS A CLUB CALL YES NO?

PURPOSE OF APPLICATION: REPEATER POINT TO POINT LINK CONTROL FREQ

IF REPEATER, SPECIFY TYPE: FM ATV

BAND: 10M 6M 2M 220 440 900 1.2 OTHER: _____

REPEATER CITY: _____ REPEATER COUNTY: _____

PHYSICAL DESCRIPTION OF SITE LOCATION: *(Information is kept confidential)* (If located on commercial tower site, please supply FCC Antenna Structure Registration Number (ASR))

REPEATER LAT/LON: (Must use NAD83 or WGS84 datum, for example 32 – 45 - 26.1 N 96 – 58 - 11.3 W)

Latitude (North): Degrees _____ Minutes _____ Seconds _____

Longitude (West) Degrees _____ Minutes _____ Seconds _____

HEIGHT OF TOWER BASE ABOVE MEAN SEA LEVEL: _____ (feet AGL)

HEIGHT OF ANTENNA (s) ON TOWER (TX): _____ ft (RX): _____ ft

ANTENNA GAIN AND RADIATION PATTERN: gain (db): _____ pattern: _____

TRANSMITTER EFFECTIVE RADIATED POWER: _____ WATTS ERP
(power out of transmitter minus duplexer minus feedline loss, times antenna gain)

PL/CTCSS _____ required for all new applications after Aug 1, 1999. Please see coordination standards for more details.

ARE LINK AND CONTROL FREQUENCIES NEEDED?: YES NO, IF SO, BAND DESIRED: _____
(A separate link coordination form is required for the Link Frequency Coordinator)

NOTES ABOUT REPEATER *(See ARRL Repeater Directory for examples of notes. Limit 11 letters.)* _____

I hereby certify that all information given is correct to the best of my knowledge. I understand that coordination will not be granted if my system does not conform within the above specifications. I also understand that any deviation from the above information will be reported to the coordinator, and may affect further coordination.

SIGNATURE: _____ DATE: _____