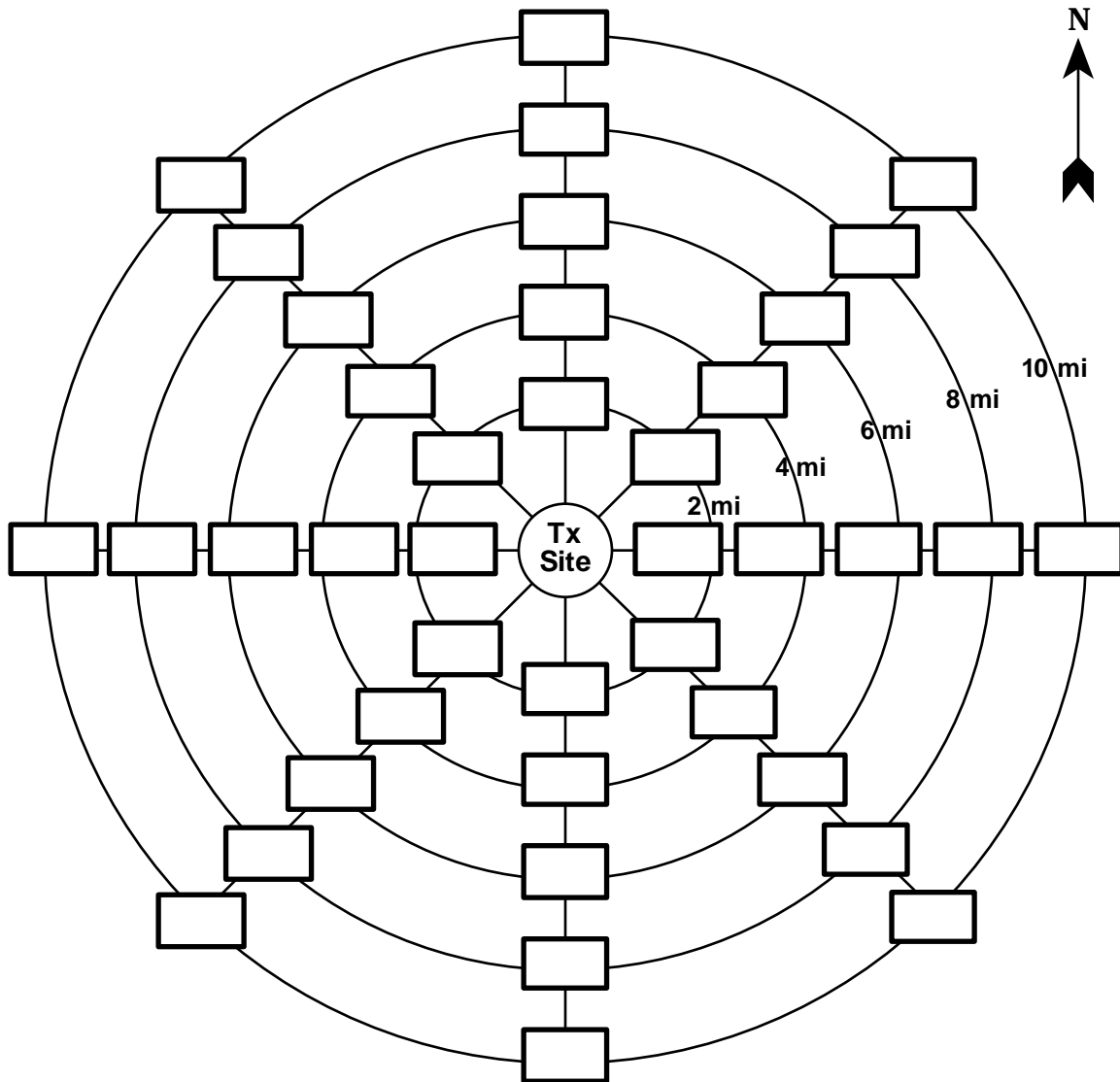

AREA REPEATER COORDINATION COUNCIL (ARCC), INC.

Amateur Radio FM and ATV Repeater and Auxiliary Link Frequency Coordination

HAAT WORKSHEET



To calculate height above average terrain (HAAT), you will need topographical maps (or equivalent topography software) that span at least 10 miles out from your repeater site in all directions. USGS 7.5 minute maps provide the best resolution. Many sporting goods, office supply, and map stores carry USGS topographical maps. Local libraries may also have maps for your area available. You can also order maps directly from the USGS (www.usgs.gov). A suggested computer software package is TopoUSA from Delorme.

1. If you are working with paper maps, arrange your maps into a mosaic, folding the map along the edges so that the map borders are out of the way. You will probably have to tape the maps together using drafting tape so that they don't shift as you work.
2. Draw a straight line outward from your repeater site (on paper maps or in your topography software), at a true north (0°) bearing, for at least 10 miles. Repeat this step at 45 degree increments, yielding a total of 8 lines outward from your site, as shown above. Mark off 2-mile increments on each of the 8 lines, at 2, 4, 6, 8, and 10 miles out from the repeater site, for a total of 40 points.
3. Read the elevation off the map for each of these 40 points and write the elevation on the HAAT diagram above.
4. Take the arithmetic mean of the elevations by adding them all together and dividing by 40. This is the average terrain elevation (**not** the height above average terrain).
5. Subtract this value from your antenna elevation above sea level to yield height above average terrain. Write the HAAT value on the coordination form(s).