

Frequency Search: Listening Report and Monitoring Instructions

As part of the process of AM frequency selection for your Information Radio Station, you can assist us in determining which frequencies are most appropriate for use at your location.

Please monitor the following frequency(s) shown on the Listening Report. Your assistance will help us in selecting the quietest candidate frequency from among the group of available frequencies listed below.

Monitor the radio frequencies twice: first, in the middle of the daytime (10AM-2PM) and next, well after the sun has set. Score frequencies on the Listening Report below based on what you hear on the SMR Receiver or automobile receiver. Fax or email this page to Bill Baker (fax 616.772.2966 or iss@theRADIOsource.com).

Listening Report

Listening Report Sheet for	
Report Date	

AM Frequency	Note	Daytime Result	Nighttime Result
	Time of Day		
	Time of Night		
	Date of Monitoring		

***NOTE:** There are likely to be other frequencies (not on this report) that are relatively quiet and would appear to be good candidates; but they are not recommended because of FCC mileage restrictions preventing Information Radio Station operation within a given distance of co-channel and adjacent-channel signal areas.*

About Frequency Monitoring

Daytime and Nighttime

In daytime, the AM band is very stable, so as soon as you tune to a frequency, you will be able to gauge its character. Listen to the frequencies provided to make sure they are all quiet (with just static/hiss) during the daytime. If you monitor an actual radio station or hear splashes of interference from one during the daytime, that disqualifies the frequency in most cases.

At night, however, you will need to monitor each frequency for a few minutes because signal levels oscillate constantly due to AM skywave interference. Of the frequencies which you found were quiet in the daytime, the goal now is to find which of those frequencies – on the average – is quietest at night. Understand that at night, all AM frequencies will have some level of noise/interference present.

Monitoring with a Signal Measurement Radio (SMR) Receiver

Follow the ISS instructions packed with the SMR Receiver to perform the monitoring. This method allows you to quantify the results.

If you do not have a SMR Receiver, you may use an informal method utilizing a car radio receiver.

Subjective Monitoring with an Automobile Radio Receiver

If you do not have a Signal Measurement Radio (SMR) Receiver, use a digital-tuning automobile receiver for the monitoring process. Make sure the radio is in good working order by tuning up and down the band. You should be able to hear radio stations or noise/static on all AM frequencies that you select. Make certain that the level of the receiver is set to the same volume as you would listen to a local broadcast station. (Tune to a local station first, set the volume level, then begin.) Make certain that the automobile's engine is off.

Score	Description
5	A very loud, local-sounding radio station, loud splashed or garble of noise.
4	A medium-level radio station, splashes or garble of noise.
3	A low-level radio station, splashed or garble of noise. Level low enough so the radio must be turned up slightly to hear. The station might come in and out in nighttime hours or mix with other stations.
2	A very faint radio station, splashes or garble of noise, faintly detectable. The station might come in and out in nighttime hours or mix with other stations.
1	Silence with only occasional hiss or static. Occasionally a faint station might be heard.

The Most-Selected Frequencies

1610 1610 is the most chosen frequency, due to its familiarity with the public, presence on all AM receivers, convenient antenna size, forgiving site requirements and its relative quietness. There are no broadcast stations on 1610 in the United States, so it is quiet day and night in most places.

1620-1700 Frequencies in the 1620-1700 range are a close second. There are few broadcast stations on these frequencies. A few remaining analog tunable-dial car radios prior to 1990 might not receive these frequencies, though this number is thought to be near zero.

Next, in Order of Preference

900-1600 Frequencies in this range are chosen due to their presence on all AM receivers, convenient antenna size and forgiving site requirements. Nighttime noise levels, however, might be higher than frequencies above 1600.

530 Might be an excellent choice in central and western areas of the country. There are no US broadcast stations on 530, so it is often very quiet at night; and a well-built transmitter site can have exceptional range. The frequency, however, is more susceptible to power-line and other environmental interference and requires a large transmitter site in order to produce an adequate signal.

540-890 These frequencies might be great choices in certain locations but are often chosen last due to higher-than-average nighttime noise levels, large transmitter site requirements and susceptibility to environmental interference.