

These licenses are designated to allow for highly-accurate terrestrial-based location determination services for asset and location monitoring, including indoors and major city applications. The licenses provide excellent propagation and can support throughput of up to 5.5 Mbps per license per site.

The LMS A Block offering has been spectrally disaggregated into 4 MHz licenses, located between 904-906 & 907.75-909.75 MHz, and 2 MHz licenses, located between 906-907.75 & 927.75-928 MHz. The 2 MHz licenses have since been terminated and the timing of reinstatement either directly or through auction is unknown.

The Channel plan including adjacent service groups is shown below:

PCS Narrow Band	LMS	Amateur	LMS	Paging
		Site- based Radiolocation (Shared)		
900 MHz		910	920	930

FCC rules permit LMS spectrum to be used for bidirectional or monodirectional systems for tracking mobile assets and systems are authorized to transmit data or possibly voice, so long as the applications is related to location functions of the system. Utilizing the spectrum for location-based services for non-mobile applications is possible, and such services have a clear advantage over GPS location services that do not work reliably indoors, are less precise and are distorted by signal absorption and reflection in urban areas, and cannot provide accurate data regarding vertical locations. The LMS licenses are particularly useful in cities with numerous tall buildings that often shield GPS signals.

LMS operations must not cause excess interference to and must tolerate interference from industrial, scientific, and medical (ISM) devices and radiolocation government stations. Maximum power of 300 Watts ERP is permitted as well as up to a 100% transmit time with no duty cycle, but other license holders such as Progeny/NextNav generally operate at 30 Watts ERP and have implemented a 10-20% duty cycle to avoid interference with Part 15 users operating in unlicensed spectrum in the 900 MHz Band. Forward links contained within the LMS sub-band must be limited in power to 30 Watts ERP. Multilateration systems will need to limit the field strength of signals transmitted from their base stations to 47 dBuV/m at the license boundary in the relatively limited of locations where the adjoining co-channel license is held by a third party.

LMS licenses have been used for both public safety and commercial mobile and fixed location monitoring and tracking and are recommended as an ideal way for U.S. wireless operators to meet the FCC’s Wireless E911 Location Accuracy requirements, Public Safety to provide E-911 operators and emergency responders with precise locations in urban environments, and for mobile advertising applications.

Equipment for the band is made by a variety of suppliers. The use of the band has been incorporated, for example, by Qualcomm in its current generation of LTC chips. **The LMS spectrum licenses are available for purchase nearly nationwide:**

A Block License	Licenses Available	MHz POPs	2016 POPs
4 MHz	128	1,002,906,524	250,726,631

Contact: Robert Finch, rfinch@selectspectrum.com, (571) 287- 8720

Visit our website at <http://selectspectrum.com> to learn more