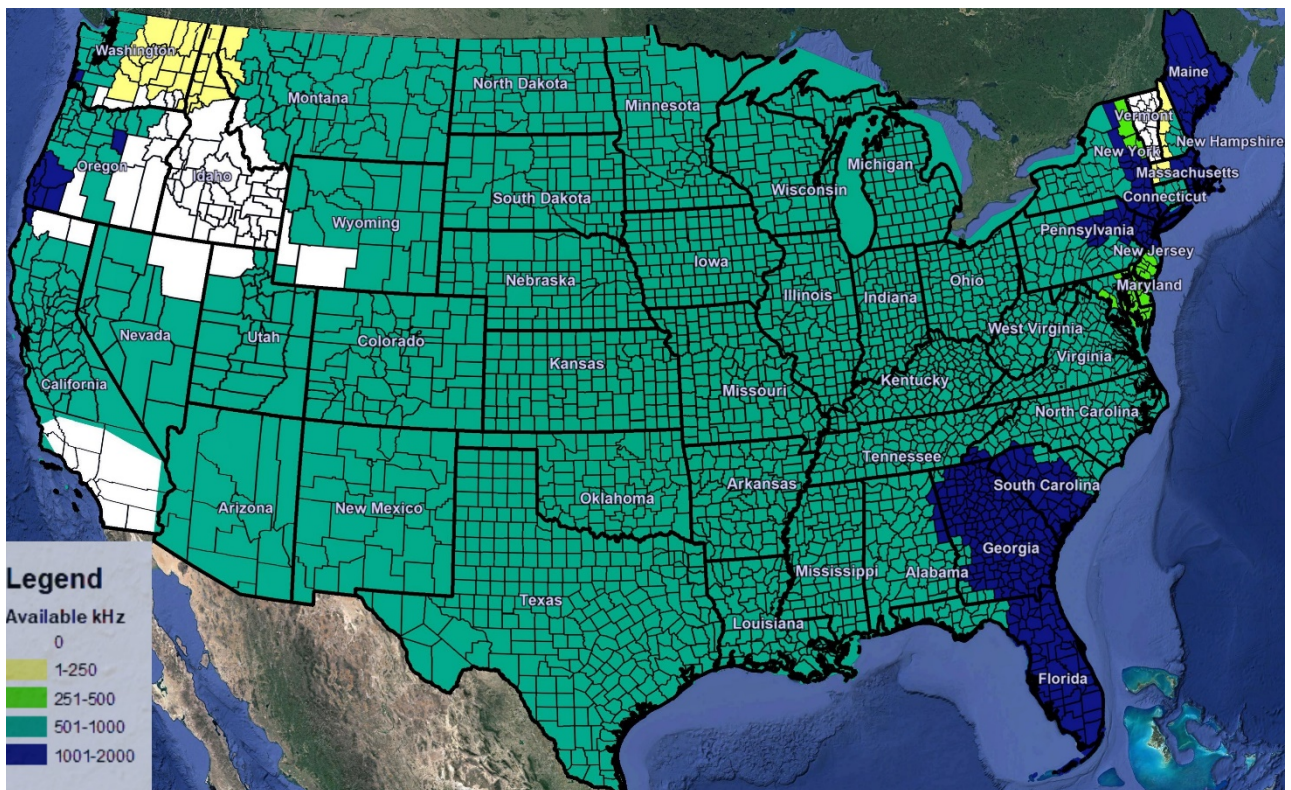


## Wireless Spectrum Licenses in the AMTS (217-220 MHz) Band Ideal for Passenger and Freight Rail Applications Available Nearly Nationwide

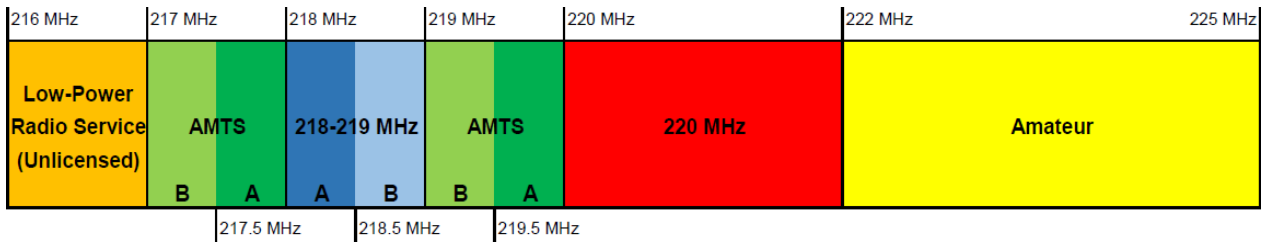
Select Spectrum represents Susan L. Uecker and Associates, Receiver and manager of **Automated Maritime Telecommunications System “AMTS” (217-220 MHz) FCC licensed spectrum** of up to 2.0 MHz bandwidth. Coverage is presently available across virtually the entire United States, and the owners will partition the licenses geographically and spectrally to match buyer requirements. **Alstom Signaling Operation, Amtrak, GE Transportation Systems**, railway consortium **PTC-220** and additional passenger and freight railways have acquired and are using AMTS and spectrum in 217-222 MHz bands for operations in areas across the U.S.

Available AMTS license coverage is shown below:



**217-220 MHz spectrum has excellent propagation and can be used for a broad range of applications including fixed & mobile data, voice, and video.** AMTS licenses are in use by and recommend for passenger and freight rail communications, land mobile radio (LMR), positive train control (PTC) and other train protection systems. PTC is Congressionally mandated with a deadline of December 31, 2018, with the possibility of an extension of two years.

The Channel plan includes A and B blocks of 1 MHz each as shown below in green:



Originally set aside for Automated Maritime Telecommunications System services, AMTS spectrum provides for a wide variety of FCC approved land uses with support of throughput of 2 Mbps or more per license per site. The licenses are typically divided into 2 x 500 kHz blocks which can be used to separate uplink and downlink; the A Block is located between 217.5-218.0 MHz / 219.5-220.0 MHz and the B Block is located between 217.0-217.5 MHz / 219.0-219.5 MHz. The large frequency allocation and wideband channels afford greater flexibility in network design and use. Two-way transmission may be divided between remote and base frequencies or by time division on the same channel. The buyer may also divide the licenses into narrower channels such as 5 or 12.5 kHz.

AMTS spectrum can be used for broadcast or two-way; mobile or fixed; data, voice or video. Maximum downlink power is 1000 Watts ERP and maximum uplink power is 50 Watts ERP which provides for long range and high reliability. Networks may employ point-to-point, point-multipoint (tall site) and/or cellular architectures.

Equipment for the band is made by Meteorcomm <http://meteorcomm.com>, Ondas Networks [www.ondas.com](http://www.ondas.com), GE MDS [www.gedigitalenergy.com](http://www.gedigitalenergy.com), 4RF [www.4rf.com](http://www.4rf.com), Cambium <http://www.cambiumnetworks.com>, XetaWave [www.xetawave.com](http://www.xetawave.com), Alligator Communications [www.alligatorcom.com](http://www.alligatorcom.com), CalAmp <http://www.calamp.com>, Tait Communications [www.taitradio.com](http://www.taitradio.com) and Hytera [www.hytera.com](http://www.hytera.com). The band is also compatible with a new IEEE wireless standard – 802.16s “GRIDMAN”. This high reliability standard is intended for use by utilities and other critical infrastructure operators. Most of the licenses are valid through 2025 when they may be renewed for a small administrative fee.

Basic information about key markets in the overall offering is shown below. In many locations, both the A and B channel block AMTS licenses are available for purchase:

Market Code	Market	Block	2017 POPs	2017 MHz POPs	Market Code	Market	Block	2017 POPs	2017 MHz POPs
AMT001	North Atlantic	A	38,570,725	34,308,559	AMT007	North Pacific	A	4,616,468	4,606,096
AMT001	North Atlantic	B	33,761,000	30,062,633	AMT007	North Pacific	B	7,376,899	5,563,735
AMT002	Mid-Atlantic	B	36,907,545	31,410,740	AMT008	Hawaii	A	1,696,625	1,611,794
AMT003	South Atlantic	A	37,096,324	36,168,916	AMT008	Hawaii	B	1,696,625	1,611,794
AMT003	South Atlantic	B	37,096,324	36,168,916	AMT009	Alaska	A	739,795	721,300
AMT004	Mississippi River	B	97,425,662	92,391,201	AMT009	Alaska	B	739,795	721,300
AMT005	Great Lakes	B	37,459,627	35,614,330	AMT010	Mountains	B	25,957,551	25,238,994
AMT006	South Pacific	B	15,664,399	14,881,179	<b>Total</b>	<b>10 Markets</b>	<b>A/B</b>	<b>302,961,374</b>	<b>350,807,819</b>

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