



Shure's Input Document to 1st Meeting of Working Group (WG) 1 of NFAP 2022 Review Committee

Contribution for updating National Frequency Allocation Table-2022 (upto1 GHz band)		
1	Name of Individual/Organization etc	Shure Audio Technologies Private Limited
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5(a)*	Nature of business	Manufacturing & Sales Service
5 (b)	Type of Organisation (Pvt industry, Association, academia, PSU, government departments etc.)	Private Industry
6	Frequency band (kHz/MHz)	470-694MHz
7*	Applications of service	Professional wireless audio devices (wireless microphone systems, In-Ear monitoring systems...,etc.) used in Programme Making and Special Events (PMSE) applications.
8	Minimum & Maximum power with unit	Max: 50mW ERP for Narrowband systems Max: 100mW EIRP/85mW ERP for Wideband systems
9	Purpose	<p>PMSE applications serve a variety of critical roles in the production of media, entertainment, and public events. PMSE supports India's very vibrant content creation industry with its film, music, theater and other sectors. This is recognized globally as noted in The Hindu Businessline :¹</p> <p style="text-align: center;"><i>"As the recently concluded Cannes film festival celebrated India as the Country of Honour, it offered a great opportunity for us to display our potential to be the future content hub for the world".</i></p> <p>The article even mentioned that "India's creative economy may drive the next wave of growth" and "For this to happen the right kind of policy framework needs to be evolved".</p> <p>Here are some key purposes and use cases of PMSE applications:</p>

¹ <https://www.thehindubusinessline.com/opinion/indias-creative-economy-may-drive-the-next-wave-of-growth/article65487350.ece>

		<ul style="list-style-type: none"> ▪ Live Events: Concerts and Festivals (musical, sports, religious), Conferences and Corporate Events. ▪ India holds a dominant position in the world of content production with Bollywood and other industries. For example, Shure has been deploying the largest single wireless install of our top tier solutions in India at the Jio World Center for the Reliance Group. ▪ Broadcasting: Live Television Production, Studio Production. ▪ Film and Video Production: Location Sound Recording. ▪ Theater and Performing Arts: Stage Productions, Musical Performances. ▪ Documentaries and News Gathering ▪ Religious and Educational Institutions: Houses of Worship, Educational Institutions. ▪ Cultural and Community Events: Parades and Festivals, Ceremonies and Celebrations. <p>The socio-economic contribution of PMSE to India's economic and cultural life is substantial. By supporting job creation, industry growth, cultural preservation, and technological innovation, PMSE plays a vital role in enhancing the quality of life and promoting India's rich cultural heritage. As the demand for high-quality audio and video technology continues to grow, the PMSE sector will remain a key driver of economic and cultural development in India.</p>
10 (a)	Countries in which similar applications are used along with web link (if known)	<ul style="list-style-type: none"> ▪ ITU-R Region 1, countries listed under footnote 5.296, example: <ul style="list-style-type: none"> ○ CEPT: ERC Recommendation 70-03 and ERC Recommendation 25-10 ○ UK, Ofcom: PMSE ▪ USA, FCC: Part 74 ,Wireless Microphones
10 (b)	Provisions in frequency allocation table along with footnote of the country along with web link (if known)	<p>ITU-R Region 1 under footnote 5.296.</p> <p>Individual countries may have their own specific regulations and footnotes that further define the use of wireless microphones and audio PMSE equipment. These national regulations can vary widely and may include additional technical and operational requirements.</p>



11	Radio Regulations provisions (if known)	Wireless microphones and PMSE devices operate under the land mobile service category as a secondary service in 470-694MHz band. Services allocated on a secondary allocation basis must not cause harmful interference to primary services and cannot claim protection from interference caused by primary services.
12*	Type of Radiocommunication service	Land mobile
13	Combatable Wireless Standard for the device likely to work in the proposed band (ETSI, 3GPP, IEEE, EC, FCC ,TEC etc or any proprietary standard)	ETSI EN 300 422
14	Benefit for public	<ol style="list-style-type: none"> 1. Enhanced audio quality: Dedicated spectrum allocation will ensure high-quality, interference-free audio for various professional audio applications. 2. Support for creative industries: This will provide a stable and predictable spectrum environment, fostering growth and innovation in the audio PMSE industry in India. 3. Economic Contribution: The audio PMSE sector supports a wide range of jobs, from equipment manufacturing to event production, contributing significantly to the economy of India. 4. Cultural Impact: High-quality audio is essential for the success of cultural and entertainment events, which in turn enhance the cultural fabric of the nation.
15	If modification in NFAP-2022 footnote then quote relevant footnote no. of NFAP-22	Shure kindly requests the addition of a footnote to the 470-694 MHz band in the NFAP. This footnote would allow the use of land mobile service intended for applications ancillary to broadcasting and Programme Making and Special Events (PMSE) on a secondary basis. Shure proposes the following text for a new India footnote: <i>“IND XX The frequency band 470-694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making.”</i>



16	Remarks	<p>Adding PMSE applications to India's NFAP is crucial for supporting the growing demand for high-quality, reliable wireless audio communications in various professional sectors. By recognizing PMSE in the allocation table, a dedicated and interference-free spectrum access is ensured for industries such as broadcasting, theater, live events, and film production. This inclusion not only fosters innovation and technological advancements but also supports the cultural and economic contributions of the creative industries, thereby enhancing the overall media and entertainment landscape of the nation. Additionally, it provides a predictable regulatory framework, giving manufacturers, event organizers, and users the confidence to invest in and deploy advanced PMSE technologies in India.</p> <p>Please note that audio PMSE does not cause harmful interference to DTT service due to that fact that an audio PMSE device cannot work with high interference and therefore avoids using occupied DTT channel. That is why in many countries in e.g., Europe audio PMSE devices are allowed on general license scheme.</p>
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Note.

- 5* . Construction service / Manufacturing service/ Shipping Service/Aeronautical Service etc
- 7*. Specify the operation of service (e.g Hand held radio/ Vehicle mobile radio/ point to point links/FM/Community Radio/Aeromobile/Short Rang Device etc
- 12* Amateur/Fixed/Land mobile/Aeronautical mobile/Maritime Mobile/Aeronautical radio navigation/FM broadcast/Community Radio Service etc

Respectfully submitted,

Rajesh Kumar Rana
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