



May 5, 2016

Ms. Marlene H. Dortch
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: PS Docket No. 13-209

Dear Ms. Dortch:

On April 25, 2016, the Commission released the text of its Report and Order in the above-referenced proceeding.¹ PowerTrunk, Inc. ("PowerTrunk") wishes to register for the record its views concerning one aspect of the decision.

Although PowerTrunk disagrees with the ultimate rule changes adopted by the Commission for the reasons PowerTrunk has previously submitted, this filing is directed to footnote 37 regarding the use of TETRA technology on the narrowband portion of the 700 MHz public safety band.

Specifically, after making an observation that "TETRA equipment is not interoperable with equipment commonly used in the NPSPAC band" (by way of citation to the 2012 TETRA Report and Order²), the Commission included the following comment in footnote 37:

"The Commission also declined to permit TETRA on the narrowband portion of the 700 MHz public safety band, noting that TETRA does not conform to the interoperability standard for the 700 MHz narrowband public safety band interoperability channels."

The comment in footnote 37 can be misconstrued when viewed in the context of the remaining portions of the *Emission Mask Report and Order*. In fact, the footnote is already causing confusion in the marketplace. For example, *Urgent Communications'* headline reads, "FCC nixes TETRA use on 800 MHz, 700 MHz public-safety bands." See attachment. This reflects a serious misreading of the *Emission Mask Report and Order*.

¹ *Emission Mask Requirements for Digital Technologies on 800 MHz NPSPAC Channels Analog FM Capability on Mutual Aid and Interoperability Channels*, Report and Order, PS Docket No. 13-209, RM-11663, FCC 16-48 ("Emission Mask Report and Order").

² *Id.* at para. 12 citing 27 FCC Rcd 11569, 11574 at para. 10 (2012) ("TETRA Report and Order").



In footnote 37 the Commission expresses the view that equipment which is TETRA-only, i.e. equipment solely using TETRA technology, is not suitable for 700 MHz narrowband operation due to an inability to operate with P25. However, this statement should not be read to include multimode radios that include TETRA and P25 technologies. In this regard, PowerTrunk has been granted type-acceptance certificates for its range of multimode TETRA/TI D-LMR/P25/analog FM subscriber radios. This accomplishment renders PowerTrunk's equipment fully compliant with all the Commission's interoperability rules in force for operation on the mutual aid channels and nationwide P25 interoperability, including narrowband 700 MHz public safety channels. Thus, the footnote, which is simply part of the Background section, is irrelevant to PowerTrunk's equipment.

Furthermore, the *Emission Mask Report and Order* effected no change in the 700 MHz narrowband rules referenced in the footnote, most particularly Rules 90.547 and 90.548 dealing with interoperability, nor did the Commission propose any such changes. Hence, the subject sentence in footnote 37 is simply not material to this proceeding.

Finally, to the extent some in the trade press have viewed the *Emission Mask Report and Order* as "nixing TETRA use on 800 MHz . . . public-safety bands," this understanding is also in error as the Commission has previously clarified in the 2013 Order on Reconsideration in the TETRA docket that "the rules adopted in the Report and Order permit TETRA technology on all channels in the 809-824/854-869 MHz band" -- including non-NPSPAC public safety channels.³

Even though the *Emission Mask Report and Order* is inconsequential for projected PowerTrunk deployments in non-NPSPAC spectrum (such as New York Transit Authority's 700/800 MHz Bus Radio System), the footnote can cause damage to PowerTrunk, other multimode equipment vendors, and their respective customers. Given the confusion in the marketplace, PowerTrunk has considered it appropriate to submit this comment for the record so as to state clearly that it does not view its interests, or those of its customers, as being affected by the referenced sentence.

A copy of this letter is being submitted electronically for inclusion in the Docket.

Respectfully submitted,

Jose Martin
Chief Executive Officer

³ Amendment of Part 90 of the Commission's Rules to Permit Terrestrial Trunked Radio (TETRA) Technology, Order on Reconsideration, FCC 13-91, 28 FCC Rcd 9639, paras. 1, 3 (2013). The text of the *Emission Mask Report and Order* para. 12 also seems quite clear on this point.



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FCC nixes TETRA use on 800 MHz, 700 MHz public-safety bands

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TETRA systems will not be permitted to operate on National Public Safety Planning Advisory Committee (NPSPAC) frequencies in the 800 MHz and 700 MHz bands, according to an FCC order that cites potential interference if TETRA was deployed on these airwaves.

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TETRA systems will not be permitted to operate on National Public Safety Planning Advisory Committee (NPSPAC) frequencies in the 800 MHz and 700 MHz bands, according to an FCC order released yesterday that cites potential interference if TETRA was deployed on these airwaves.

“In this Report and Order, we adopt rules that guard against interference to critical public safety communications in the 800 MHz National Public Safety Planning Advisory Committee (NPSPAC) Federal Communications Commission FCC 16-48 2 band1 (806-809/851-854 MHz) by confirming the emission mask applicable to digital transmissions in the NPSPAC band,” the FCC order states.

“In so doing, we lessen the possibility that first responders will encounter harmful interference in the NPSPAC band and provide certainty to manufacturers concerning the capabilities required of radios used for interoperable communications.”

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Although the FCC order focuses primarily on 800 MHz public-safety spectrum, a footnote in the order also addresses the public-safety 700 MHz narrowband airwaves.

“The Commission also declined to permit TETRA on the narrowband portion of the 700 MHz public safety band, noting that TETRA does not conform to the interoperability standard for the 700 MHz narrowband public safety band interoperability channels,” the FCC order

states.

TETRA is the dominant public-safety LMR technology in many parts of the world, including Europe. But Project 25 (P25) as the primary interoperable standard in the United States and conforms to Emission Mask H to limit adjacent-channel interference.

The FCC has allowed TETRA to be deployed in the U.S. on spectrum that is not dedicated for public-safety use, but there has been some debate in recent years whether TETRA could be deployed on public-safety spectrum.

TETRA manufacturer PowerTrunk—now owned by the Sepura Group—has been the biggest proponent of TETRA being allowed for use on public-safety narrowband spectrum. PowerTrunk’s low-power TETRA technology conforms only to Emission Mask B, which was allowed by FCC rule for analog transmitters equipped with an audio low-pass filter.

Although the FCC acknowledged that its previous rulings had created some ambiguity in the industry about what technologies are allowed on public-safety spectrum, yesterday’s order is designed to close this “loophole” and bring greater certainty to the market, the order states.

PowerTrunk stated in FCC filings that the TETRA emission mask would create a greater potential for interference with surrounding systems, but the company asserted that regional planning committees (RPCs) could address this. In addition, the company claimed that TETRA’s greater spectral efficiency in delivering data would offset any interference disadvantages.

But the FCC disagreed with the PowerTrunk argument, claiming that other LMR technologies offer similar data throughput without the interference risk of low-power TETRA.

“It is inescapable that PowerTrunk’s equipment—which conforms only to Emission Mask B—has a greater potential for adjacent-channel interference than equipment that conforms to Emission Mask H and analog signals subject to audio low-pass filtering,” the FCC order states. “Therefore, to accommodate a low-power TETRA system such as PowerTrunk’s, the RPCs would be required to increase geographic separation, thereby limiting the use of available spectrum in the NPSPAC band, which already is congested in large metropolitan areas.”

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