Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving Public Safety Communications	)	
in the 800 MHz Band	)	
	)	
Consolidating the 900 MHz Industrial/Land	)	WT Docket No. 02-55
Transportation and Business Pool Channels	)	
	)	

E.F. JOHNSON COMMENTS IN RESPONSE TO THE NOTICE FOR PROPOSED RULE MAKING

E.F. Johnson Company is pleased to comment on FCC docket 02-55, *Notice of Proposed Rule Making*, concerning *Improving Public Safety Communications in the 800 MHz Band, Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*.

E.F. Johnson Company, a subsidiary of Transcrypt, International, Incorporated, is a manufacturer of Private Land Mobile equipment, with offices in Washington, D.C, Lincoln, NE, and Waseca, MN. E.F. Johnson has been a manufacturer of radio equipment for over 75 years, with a history of private radio equipment manufacturing for over thirty years. Currently our products cover Public Safety systems, as well as Business and Industrial products.

E.F. Johnson Co. applauds the efforts of the FCC to eliminate the causes of interference to Public Safety systems in the 800 MHz frequency band. We feel that this is a major

concern, and one that can have significant impact in certain Public Safety scenarios. We would like to offer the following comments in response to questions posed in the Notice of Proposed Rulemaking.

E.F. Johnson is very concerned over the proposed band restructuring plans that have been put forth in the Notice of Proposed Rulemaking. Specifically, in the restructuring plans that are presented, Public Safety users are required to relocate from their existing frequencies and move to a different portion of the band. Due to the nature of Public Safety operation, it is required that communications not be disrupted during the move. This will almost certainly require the fixed station and infrastructure of the system to be duplicated and both the existing and new infrastructures be operated simultaneously for a certain transitional period of time. During this transitional period of time, all subscriber units must be retuned or reprogrammed to new frequencies. The proposed move of Public Safety systems to the lower portion of the band will almost certainly require every Public Safety system to undergo such a transition. This type of move will be very costly and difficult, requiring a great deal of coordination. In addition, free spectrum to accommodate the "green space" in which to transition the frequency bands has not been identified.

E.F. Johnson feels that since the upper portion of the band from 821 MHz to 824 MHz and 866 to 869 (the NPSPAC band) is currently utilized exclusively for Public Safety, it is not wise to relocate any users from that spectrum. In this frequency band, many statewide, major metropolitan, or countywide systems are deployed. These

systems are typically of a complex, wide-area configuration, employing receiver voting, simulcast, and significant infrastructure content. Relocation of this infrastructure, or duplication at a new frequency assignment would, indeed, be prohibitively costly. In any type of band restructuring, it is felt that the upper portion of the 800 MHz band makes the most sense to remain for Public Safety use. We feel that if any Public Safety relocation is required, other users could move up in frequency to be adjacent to the NPSPAC band. In general, however, we favor as little disruption of Public Safety users as possible.

E.F. Johnson is also concerned over the recommendation that Business and Industrial/Land Transportation users vacate the 800 MHz spectrum, and relocate elsewhere, possibly in the 900 MHz band. We are also concerned over the suggestion that those users relocate at their own expense. To be sure, many of these licensees provide services that are critical to the public welfare, especially in times of disaster or crisis. It is also worthy of note that these users are not part of the interference problem to Public Safety systems. Indeed, the technologies deployed by these users are compatible with technologies deployed by Public Safety. It is, therefore, felt that these users should be allowed to remain in the 800 MHz band. If relocated in frequency within the 800 MHz band, they could occupy a band between Public Safety and other services.

With the above recommendations, we suggest that the digital CMRS licensees be relocated to other frequency spectrum. One potential spectrum is in the 700 MHz band, where 30 MHz of spectrum is targeted for CMRS operation, and guard bands are in place to mitigate interference potential to Public Safety deployments. This would, of course,

require reevaluation of the use of the 700 MHz spectrum, and would impact the planned spectrum auction.

In the event that a decision is made to reallocate the 800 MHz frequency band, in which Public Safety and digital CMRS users are segregated within portions of the 800 MHz band, we believe that additional technical requirements should be placed on CMRS deployments to ensure that interference is truly minimized. E.F. Johnson believes that requirements should be placed on out-of-band emissions from CMRS stations that fall on Public Safety frequencies. Knowing that Public Safety systems are deployed as noise limited systems, we propose that out-of-band emissions be of such a limit to ensure that the noise floor within the public safety band is raised by no more than 3 dB by the presence of the CMRS transmitters. While this technical requirement does not ensure that interference does not occur, it is a necessary step to ensure that this one cause of interference is controlled. These additional out-of-band technical limits would not necessarily be applied to CMRS transmitter requirements, but could be implemented by external filtering to the CMRS sites.

Also, in the event that a decision is made to reallocate Public Safety users within the 800 MHz band, E.F. Johnson is recommending that the technology deployed in the new portion of the band be compatible with equipment that is currently deployed. That is, we would recommend analog technology of the 25 kHz channel spacing be allowed. Further, we would recommend that no additional technical requirements be placed on currently deployed equipment. This would enable the migration of existing equipment

into the new portions of the band. In addition, we would recommend that all currently FCC certified equipment for this frequency band by allowed to continue to be offered for sale. This would ensure the smoothest transition of the frequency band. We further recommend that if new technologies, such as digital or 12.5 kHz channeled analog, are considered for this band that they be mandated only in newly certified equipment.

Johnson does not favor the mandating of receiver standards as a means of controlling interference. We believe that the competitiveness of the industry and the level of awareness of potential interference issues will drive the industry toward higher receiver performance. We believe that FCC mandated receiver standards would only complicate the equipment certification process. However, if receiver standards were mandated, we would recommend that the "Class A" standards as defined in TIA/EIA-603-A be applied. We believe that these standards represent a consensus of users and manufacturers, and represent a good level of interference protection, consistent with the state of the art.

E.F. Johnson Company would like to express its appreciation for the opportunity to comment on these matters.

Respectfully Submitted,

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