wireless microphones for public safety and commercial use because some LPTV stations, TV translators, and Class A stations are continuing to operate in the 700 MHz Band after the transition.[150] We need to establish expeditious time frames and procedures for clearing wireless microphones from the 700 MHz band on our path to providing an interference-free environment for new services in the 700 MHz Band, especially public safety services that are used to protect safety of life, health, or property. Considerations affecting broadcast services other than full-power television broadcast operations should not delay the clearing of wireless microphones.

50. We also decline to adopt Nady's proposal that our transition plan should provide for the negotiation of relocation.[151] As stated above, entities currently operating low power auxiliary stations, including wireless microphones, may continue to operate in the 700 MHz Band until June 12, 2010, subject to the conditions set forth in this Report and Order. Accordingly, we are allowing them to operate in the 700 MHz Band for some time during the transition period. These operators, however, must accept interference from other licensees in the band and must not cause interference to 700 MHz licensees during this transition period, and also are subject to the other conditions we adopt herein, including the requirement to cease operations under the early clearing notification procedures.

51. We deny as well the requests by WCA and PISC that we not provide a transition but adopt a waiver procedure for licensed wireless microphone operations in the 700 MHz Band after the end of the DTV transition. We find that the waiver procedures requested by these parties are not necessary. First, parties may always request a waiver under the general waivers provisions in our rules.[152] Second, we do not find that a separate waiver provision is warranted because of our determination to allow a limited transition period during which users may operate low power auxiliary stations. We are making clear in our rules that entities operating low power auxiliary stations, including wireless microphones, in the 700 MHz Band may continue to operate on those frequencies until June 12, 2010, subject to the conditions adopted herein. Some operations by low power auxiliary station users in the band may be required to end prior to that time under the 60-day notice procedure that we are adopting. We therefore deny their requests that we adopt a waiver procedure for authorized wireless microphones and other low power auxiliary stations operating in the 700 MHz Band.

52. Furthermore, we find that the steps we are taking in this order sufficiently address arguments raised by some parties that there is insufficient spectrum for wireless microphone users outside of the 700 MHz Band, or that replacement spectrum should be made available for wireless microphone operations. As explained elsewhere in this Report and Order, we are adopting an approach that will permit wireless microphone operations to continue on a temporary basis in the 700 MHz Band and in the core TV bands while we consider final rules on the issues addressed in the Further Notice. Under the first step for moving ahead under this approach, we are waiving our Part 15 rules to permit unauthorized wireless microphone users to operate in the 700 MHz Band on an unlicensed basis until June 12, 2010, and to permit operation of wireless microphones in the core TV bands on the same unlicensed basis until the effective date of the rules that will be adopted in response to the Further Notice. Under the next step, we propose and seek comment in the Further Notice on specific rules for operation of wireless

[150] The transition timing for low power, translator and Class A stations will be addressed in a separate proceeding. *See* Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion To Digital Television, MB Docket No. 07-91, *Report and Order*, 23 FCC Rcd 2994, 2996 ¶ 3 & n.5 (2007) (citing Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations, MB Docket No. 03-185, *Report and Order*, 19 FCC Rcd 19331, 19336 ¶ 12 (2004)).

[151] *See* Nady Comments at 7, 8-10.

[152] *See* 47 C.F.R. § 1.925.

microphones under Part 15 of our rules in the TV bands, and we seek comment on some expansion of the licensee eligibility for Part 74 low power auxiliary stations. We also seek comment on possible revisions to our Part 90 rules for licensed operation of wireless microphones. The Further Notice will allow us to consider the use of certain spectrum outside of the 700 MHz Band by wireless microphones, and provides a reasonable and efficient path forward to examine the future of wireless microphone operations.

53. Finally, we conclude that the steps we have taken in this Report and Order are sufficient to address concerns that the presence of low power auxiliary station users operating in the 700 MHz Band would impede the ability of 700 MHz commercial licensees to comply with their build-out requirements such that they should be granted additional time to meet these requirements.[153] Given that the steps we take enable these 700 MHz licensees to begin operating in areas in the band based on the licensees' own timetables, we find that these licensees' ability to meet their build-out obligations will not be hampered by interference from low power auxiliary stations, and we reject proposals to delay implementation of 700 MHz construction requirements. For these same reasons, we also reject MetroPCS's argument that a delay in clearing the band could constitute a *de facto* modification of its licenses.[154]

54. The rules adopted in this Report and Order with respect to the clearing of the 700 MHz Band by June 12, 2010 and the early clearing procedures will take effect upon the publication of a summary of this Report and Order in the Federal Register. We find that there is good cause for departure from the 30-day delay in the effective date under the Administrative Procedure Act. In this Report and Order, we are taking steps to expedite the availability of unencumbered spectrum for public safety and new commercial licensees, in order that such licensees will be able to operate without interference in the 700 MHz Band.[155] We find that under these circumstances, a further delay in the effective date of the clearing procedure rules would be contrary to the public interest.

B. Prohibition of the Manufacture, Import, Sale, Lease, Offer for Sale or Lease, or Shipment of 700 MHz Band Low Power Auxiliary Stations

55. Background. In the *Notice*, the Commission sought comment on its tentative conclusion to prohibit the manufacture, import, sale, offer for sale, or shipment of low power auxiliary stations that operate in the 700 MHz Band, and to have the prohibition take effect on the effective date of the revised rules.[156] The Commission stated that such a prohibition would facilitate the DTV transition by "helping address possible concerns about significant unauthorized operation of wireless microphones in the 700 MHz Band, and therefore help minimize the likelihood that additional unauthorized use would occur after the end of the DTV transition."[157]

56. Shure states that it no longer manufactures equipment that operates in the 700 MHz Band for use in the United States, and Audio-Technica says it no longer develops new 700 MHz products.[158]

---

[153] *See* MetroPCS Reply Comments at 7-8; *see also* AT&T Reply Comments at 3-4 (commenting that constructing new network already has significant challenges). PAMA does "not object to the prohibition of further manufacture of 700 MHz wireless microphone equipment so long as the prohibition only applies to *U.S. domestic distribution* on the DTV transition date." PAMA Jan. 5, 2009 *Ex Parte* at 4 n.6.

[154] *See* MetroPCS Reply Comments at 5-6.

[155] *See* 5 U.S.C. § 553(d)(3) (good cause exception to APA 30-day delay requirement); *see also* 47 C.F.R. § 1.427(b) (for good cause, Commission rules may be made effective within less than 30 days from publication in the Federal Register).

[156] *Notice*, 23 FCC Rcd at 13114 ¶ 17.

[157] *Id.*

[158] Shure Comments at ii; Audio-Technica Comments at 5.

WCA supports the Commission's proposal due to the risk of interference to public safety and commercial operations from low power auxiliary stations operating in the 700 MHz Band.[159] Verizon Wireless supports the prohibition particularly because of the authorized and unauthorized use on the spectrum,[160] and in an *ex parte* urges the Commission to "ban the domestic manufacture and sale of wireless microphone and other [low power auxiliary station] devices capable of operating in the 700 MHz band" and to adopt appropriate labeling requirements for devices manufactured for export.[161] In connection with other recommendations concerning the use of wireless microphones, Motorola proposes that the Commission "[p]rohibit the manufacture, sale and importation of . . . [wireless microphones] in . . . [channels] 52-59 for domestic use effective immediately."[162] Other commenters also support the prohibition, including the State of California, MSTV/NAB, Nady, and V-COMM.[163] SBE discusses the extent of unauthorized operation of devices that are certificated for use under Part 74, and comments that we should "prohibit the marketing, sale or shipment of 700 MHz [low power auxiliary station] devices at some point after the DTV transition is completed satisfactorily."[164] In addition, in *ex parte* filings, a group including wireless service providers, public safety groups, and public service organizations supported this prohibition.[165] Public Knowledge, in an *ex parte* filing, urges the Commission to "stop the sale of devices to unauthorized users as soon as possible."[166] In another *ex parte* filing, CTIA, APCO, NENA, and others jointly propose specific steps that the Commission should take that would help in preventing new low power auxiliary stations from being sold and available for use in the 700 MHz Band. These steps include: prohibiting the manufacture, import, or shipment of such devices that operate in the 700 MHz Band and are intended for domestic use by rules effective 30 days after publication in the Federal Register; prohibiting the domestic display, marketing or sales of existing non-conforming devices; and requiring all non-conforming devices manufactured solely for foreign/export sales to include labeling on the device and in marketing materials stating that the device is not authorized for sale or operation in the United States.[167]

57. Sennheiser agrees that the sales of the equipment should stop, but asserts that we should reconsider the timing of placing the ban into effect.[168] Sennheiser argues that the *Notice* in this instance is far shorter than for the discontinuation of any product, and that the Commission should rethink the timing of its prohibition. Sennheiser contends that when the Commission has prohibited the marketing of a previously lawful product, even one that caused actual, harmful interference, a longer time was provided

[159] WCA Comments at 5.

[160] Verizon Wireless Comments at 6-7.

[161] Verizon Wireless Mar. 18 *Ex Parte* at 1.

[162] Motorola Aug. 6 *Ex Parte*, Attachment.

[163] *See* State of California at 1; MSTV/NAB Comments at 3 n.5; Nady Comments at 3; V-COMM Comments at 11.

[164] *See* SBE Comments at 6-7, 9.

[165] *See* Alcatel-Lucent, et al. Nov. 13 *Ex Parte*; CTIA Nov. 13 *Ex Parte*; *see also* APCO et al. Apr. 7 *Ex Parte* at 4 (position of APCO, CTIA, NENA, and NPSTC).

[166] Letter from Harold Feld, Legal Director, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167 and ET Docket No. 04-186 (filed June 18, 2009) ("Public Knowledge June 18 *Ex Parte*") at 1.

[167] APCO et al. Apr. 7 *Ex Parte* at 4-5. This *ex parte* also asserts that these steps would be consistent with other actions taken by the Commission to protect consumers during the DTV transition, as well as with other Commission actions. *Id.* at 5-6.

[168] *See* Sennheiser Comments at 14-16.

to continue sales.[169] Sennheiser claims that except for public safety operations in the upper part of the 700 MHz Band, a February 17, 2009, deadline (which was formerly the scheduled end of the DTV transition) would be unnecessarily harmful to the industry and to the users of the equipment.[170]

58. Sennheiser and Shure both assert that the Commission should not ban the manufacture of wireless microphones for export.[171] They argue that the Commission lacks the authority to direct such a ban against products intended for export, and Shure comments that banning exports would be contrary to the public interest in several respects, including strengthening the position of U.S. companies in foreign markets.[172] In response, several parties, including CTIA and public safety organizations, have indicated in *ex parte* filings that they would not object to the manufacture or shipment solely for low power auxiliary station equipment destined for non-U.S. markets.[173]

59. Discussion. We revise our rules to prohibit the manufacture, import, sale, lease, offer for sale or lease, or shipment of low power auxiliary stations for operation in the 700 MHz Band in the United States, effective upon the publication of a summary of this Report and Order in the Federal Register. We find that this prohibition serves the public interest because it will provide greater assurance that the 700 MHz Band will be made available to public safety and new commercial licensees.

60. The Communications Act of 1934, as amended, authorizes the Commission "consistent with the public interest, convenience, and necessity, [to] make reasonable regulations . . . governing the interference potential of devices which in their operation are capable of emitting radio frequency energy by radiation, conduction, or other means in sufficient degree to cause harmful interference to radio communications" and these regulations "shall be applicable to the manufacture, import, sale, offer for sale, or shipment of such devices . . . , and to the use of such devices."[174] The Act further provides that "[n]o person shall manufacture, import, sell, offer for sale, or ship devices . . . , or use devices, which fail to comply with regulations promulgated pursuant to this section."[175]

61. Our decision to prohibit the manufacture, import, sale, lease, offer for sale or lease, or shipment of low power auxiliary stations that operate in the 700 MHz Band is necessary to ensure that new services in this valuable spectrum will be provided without interruption to benefit all Americans.[176]

---

[169] *Id.* at 3, 14-16.

[170] *Id.* at 3.

[171] *See* Sennheiser Reply Comments at 3-4; Shure Comments at 14; Shure Reply Comments at 13-15; *see also* Motorola Aug. 6 *Ex Parte*, Attachment (noting, in connection with other proposals, that the manufacture of these devices should be allowed for export).

[172] *See* Shure Comments at iii, 14; Shure Reply Comments at iii, 14-15; Sennheiser Reply Comments at 3-4. *See also* Letter from Catherine Wang, Counsel to Shure, to Michael Copps, Acting Chairman, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167 (filed Mar. 2, 2009) ("Shure Mar. 2 *Ex Parte*"); PAMA Jan. 5, 2009 *Ex Parte* Comments at 4 n.6 (objecting to any prohibition on the manufacture and distribution of 700 MHz equipment for export).

[173] *See* Letter from Robert M. Gurss, Director, Legal & Government Affairs, APCO, Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA, Dr. Brian Fontes, Executive Director, NENA, and Ralph A. Haller, Chair, NPSTC, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167 (filed Mar. 9, 2009) ("APCO et al. Mar. 9 *Ex Parte*") at 1-2 & n.4; *see also* APCO et al. Apr. 7 *Ex Parte* at 4 (recommending the prohibition apply to LPAS devices that operate in the 700 MHz Band and are intended for domestic use).

[174] 47 U.S.C. § 302a(a).

[175] *Id.* § 302a(b).

[176] *Id.*; *see also* 47 C.F.R. § 2.803(a) (stating that no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship, or distribute for the purpose of selling or leasing or offering for sale or (continued....)

Public safety agencies are already making use of the 700 MHz Band, and deployment of additional public safety systems is expected to proceed at a rapid pace. Commercial wireless providers are currently preparing to deploy advanced systems that will support new and faster wireless broadband services, once the spectrum is available at the conclusion of the DTV transition.[177]

62. This prohibition is a reasonable corollary to our decision in this Report and Order to prohibit the operation of low power auxiliary stations in the 700 MHz Band permanently after June 12, 2010, subject to conditions that would require their operation to cease at an earlier date. Since low power auxiliary station equipment will no longer be allowed to operate in the 700 MHz Band after June 12, 2010, we must also prohibit the manufacture, sale, and all other steps that would make wireless microphones available for use in the 700 MHz Band. The prohibition on manufacture, sale, and lease of devices addresses concerns about the potential for increased interference to 700 MHz licensees, including public safety users, by decreasing the number of devices available for use in the band. For the same reason, it also addresses concerns about the proliferation of unauthorized uses in the band. We note that Shure, one of the largest manufacturers of wireless microphone equipment,[178] states that it no longer manufactures 700 MHz equipment for use in the U.S.,[179] and that Audio-Technica, another large manufacturer of wireless microphones, ceased development of new 700 MHz equipment approximately eight years ago.[180] In addition, allowing the sale or lease of devices that can operate in the 700 MHz Band is inconsistent with our goal of taking all steps necessary to make this spectrum available both to public safety and commercial licensees.

63. We reject Sennheiser's argument that we delay the implementation of the ban on the marketing of devices.[181] We neither agree that the lead time for implementation of the ban is unreasonable, nor that we must wait for actual interference to occur. As we discuss in this section, in adopting the ban we are particularly concerned with the use of the spectrum at a time when the spectrum is to be available for new licensees and new services. Moreover, contrary to Sennheiser's assertions, and as we discuss elsewhere in this Report and Order,[182] we find that sufficient notice was provided indicating that the use of the 700 MHz Band by wireless microphones and other low power auxiliary stations would no longer be authorized. Elsewhere in this Report and Order, we find that entities operating low power auxiliary stations in the 700 MHz Band must cease operations of those devices in the band after June 12, 2010, subject to the early clearing conditions set forth in this Report and Order. Therefore, it would not serve the public interest to permit the manufacturing and marketing of equipment that can be used in the 700 MHz Band beyond June 12, 2010, and earlier where the clearing mechanisms we are adopting are utilized.

64. Consistent with the arguments of Shure and Sennheiser, we do not prohibit manufacturers

(Continued from previous page)
lease, any radio frequency device unless such device has been authorized by the Commission in accordance with the Commission's rules).

[177] *See* Alcatel-Lucent, et al. Nov. 13 *Ex Parte*.

[178] "FCC Set to Test White Spaces Devices at FedExField" News Release, Shure Pro Audio, Aug. 6, 2008 at http://www.shure.com/ProAudio/PressRoom/PressReleaseArchive/2008PressReleases/usPpro_pr_ws_2008_fedex_field.

[179] *See* Shure Comments at ii.

[180] *See* Audio-Technica Comments at 5.

[181] *See* Sennheiser Comments at 14-16. Sennheiser concurs that sales of the equipment should cease, but not with the schedule proposed in the *Notice*. *Id.* at 4, 14-16.

[182] *See supra* Section III.A.

from manufacturing low power auxiliary stations, including wireless microphones, for export.[183] The provisions of Section 302 of the Act, as amended, which addresses, among other matters, the prohibition of the manufacture, import, sale, offer for sale, or shipment of devices, are not applicable to "devices or home electronic equipment and systems manufactured solely for export . . . ."[184] Accordingly, we clarify that our decision today to prohibit the manufacture, import, sale, lease, offer for sale or lease, or shipment of low power auxiliary stations that operate in the 700 MHz Band is not applicable to devices manufactured solely for export.[185] Finally, we revise our rules to require that any person who manufactures, sells, leases, or offers for sale or lease low power auxiliary stations, including wireless microphones, that are destined for non-U.S. markets and that are capable of operating in the 700 MHz Band[186] shall include labeling in all sales, marketing, and packaging materials, including online materials, related to such devices. The labeling must make clear that the devices cannot be used in the United States.[187] We find that this rule is consistent with the public interest, convenience, and necessity.

65. To protect consumers in the United States, and to help ensure that no wireless microphones and other low power auxiliary stations that operate in the 700 MHz Band continue to be made available for use in contravention of our efforts to remove those devices from the band in the United States, we require retailers to remove from display (including online display) any low power auxiliary stations, including wireless microphones, that can operate in the 700 MHz Band, as well as any marketing material that does not comply with the requirements adopted herein.

66. The rules relating to the prohibition on the manufacture, import, sale, lease, offer for sale or lease, or shipment of low power auxiliary stations that operate in the 700 MHz Band will take effect upon the publication of a summary of this Report and Order in the Federal Register, except the labeling requirement for devices manufactured solely for export. We find that there is good cause for departure from the 30-day delay in the effective date under the Administrative Procedure Act. In this Report and Order, we are taking steps to expedite the availability of unencumbered spectrum for public safety and new commercial licensees consistent with the Commission's long-standing goal of making the spectrum fully available for those licensees.[188] Under these circumstances, we find that a delay in the effective date of the prohibition would be contrary to the public interest. With respect to the labeling requirement for devices manufactured solely for export, we find that this requirement should take effect 90 days after release of this Report and Order (*i.e.*, April 15, 2010). This period provides sufficient time for entities that manufacture, sell, lease, or offer for sale or lease low power auxiliary stations that are destined for non-U.S. markets and that are capable of operating in the 700 MHz Band to comply with this labeling requirement.

---

[183] *See* Shure Comments at 14; Shure Reply Comments at 13-15; Sennheiser Reply Comments at 3-4.

[184] 47 U.S.C. § 302a(c).

[185] *See id.*; *see also* Review of Part 15 and other Parts of the Commission's Rules, ET Docket No. 01-278, *First Report and Order,* 17 FCC Rcd 14063, 14068-69 n.45 (2002) (noting that equipment manufactured in this country solely for export is exempt from compliance with the requirements promulgated under Section 302 of the Communications Act); 47 C.F.R. § 2.807 (exempting radiofrequency devices manufactured "solely for export" from the provisions of 47 C.F.R. § 2.803).

[186] By the phrase "capable of operating in the 700 MHz Band," we intend to include devices that a user can reprogram, pursuant to the user manual or instructions, to operate in the 700 MHz Band.

[187] CTIA and a number of public safety entities support such labeling requirements. *See* APCO et al. Apr. 7 *Ex Parte* at 4; APCO et al. Mar. 9 *Ex Parte* at 2.

[188] *See* 5 U.S.C. § 553(d)(3) (good cause exception to APA 30-day delay requirement); *see also* 47 C.F.R. § 1.427(b) (for good cause, Commission rules may be made effective within less than 30 days from publication in the Federal Register).

C. Procedures to Modify Licenses

67. Background. In the *Notice*, the Commission sought comment on its tentative conclusion to modify existing licenses that allow the operation of low power auxiliary stations in spectrum that includes the 700 MHz Band so as not to permit them to operate on the 700 MHz Band past February 17, 2009, which at that time was the scheduled end of the DTV transition.[189] The Commission stated that those individual licenses would continue to allow use of all frequencies currently included in those licenses other than the 700 MHz Band through the end of their existing term, and licensees could seek to amend their licenses to include additional frequencies permitted under Part 74, Subpart H if they chose to do so. The Commission further stated that the purpose for this tentative conclusion was its concern that continued use of the 700 MHz spectrum by existing licensees of low power auxiliary stations may be disruptive to new public safety and other wireless operations in the 700 MHz Band, and noted the ready availability of other means that those licensees have under the rules for obtaining access to various other spectrum frequencies in which to operate low power auxiliary stations.[190]

68. Verizon Wireless, V-COMM, and the State of California support adoption of the Commission's proposal to modify the licenses.[191] The State of California argues that this action would assist in significantly reducing the number of sources of interference to first responder agencies relying on public safety spectrum in the 700 MHz Band after what was then the end of the DTV transition, February 17, 2009.[192] Audio-Technica objects to the modification of licensees' 700 MHz Band authority in connection with the proposal to prematurely end existing operations in the 700 MHz Band.[193]

69. Discussion. For the reasons set forth above, we conclude that the public interest would be best served by clarifying that entities operating low power auxiliary stations, including wireless microphones, in the 700 MHz Band may continue to operate in that band until June 12, 2010, but only under the conditions adopted in this Report and Order. Accordingly, through this rulemaking proceeding, we hereby modify the licenses of all low power auxiliary stations that authorize operation in the 700 MHz Band (*i.e.*, 698-806 MHz), to delete the authorization to operate on this particular spectrum, effective June 12, 2010.[194] In the event that any low power auxiliary station must cease operations prior to June 12, 2010 under the clearing mechanisms we adopt in the Report and Order, then the license relating to that low power auxiliary station will be modified automatically without Commission action to delete the authorization to operate on the 700 MHz Band effective on the date that operations are required to cease in the band. In taking this action, we implement our decisions to ensure that the effective use of the 700 MHz Band by public safety and commercial licensees at the end of the DTV transition is not compromised, and that these new licensees will be able to operate free from interference by low power auxiliary stations operating in the 700 MHz Band.

70. Most low power auxiliary station licensees that are authorized to operate in the 700 MHz Band are also authorized to operate in a number of other bands that are specified in Section 74.802 of the Commission rules.[195] These multiple band licensees may continue to operate in other bands identified in

---

[189] *See Notice*, 23 FCC Rcd at 13113-14 ¶ 16.

[190] *Id.*

[191] *See* Verizon Wireless Comments at 3; V-COMM Comments at 11; State of California Comments at 1.

[192] *See* State of California Comments at 2.

[193] *See* Audio-Technica Comments at 5-6.

[194] *See Committee for Effective Cellular Rules v. FCC*, 53 F.3d 1309 (D.C. Cir. 1987); 47 U.S.C. § 316(a)(1).

[195] Appendix D lists all low power auxiliary station licenses under Part 74, Subpart H that include authorizations to operate on frequencies in the 700 MHz Band, according to the Commission's records.

their licenses without further Commission action. Those licensees, however, whose current authorization limits them in whole or in significant part to operations in the 700 MHz Band can be accommodated with the use of spectrum from the core TV bands that are available for low power auxiliary station operations under Section 74.802 of the rules. Such licensees may wish to consult with a local Society of Broadcast Engineers (SBE) coordinator to identify suitable spectrum from other spectrum bands that are available for low power auxiliary station operations under Section 74.802 of the rules. Once replacement spectrum has been identified, as a matter of administrative convenience, the licensee should file an application to modify its authorization to include the identified frequencies. This will enable the Wireless Telecommunications Bureau (Bureau) to modify the affected license in conformance with the revised rules adopted in this order.

D. Unlicensed Operation of Wireless Microphones under Part 15; Waivers

71. Background. In the *Notice*, the Commission sought comment on issues raised in PISC's Petition relating to the operation of low power auxiliary stations by users that are not licensed under Part 74. PISC asserted in its Petition that unauthorized use of wireless microphones by ineligible users has become widespread.[196] PISC proposed that the Commission address unauthorized wireless microphone use by, among other things, creating a "General Wireless Microphone Service" (GWMS) that would be licensed by rule under Section 307(e) of the Communications Act, and would operate on a secondary basis in the TV bands below the 700 MHz Band and on a primary basis in the 2020-2025 MHz band.[197] PISC also proposed that GWMS wireless microphones operate on a "co-equal" basis with TV Band Devices.[198]

72. The record does not indicate how many unauthorized wireless microphones are operating in the 700 MHz Band. In its Petition, PISC cited an "industry author" who estimated that in 2006, there were 400,000 wireless microphones in use in the United States.[199] PISC noted that there are fewer than 1,000 active licenses for low power broadcast auxiliary service under Part 74 and asserted that the current number of unlicensed wireless microphones "may well exceed one million."[200] Audio-Technica responds that the article cited by PISC does not provide any source for this number and "does not state how many of the 400,000 wireless microphones which it claims were in use were licensed versus unlicensed."[201] Audio-Technica also asserts that the estimate refers to the total number of microphones in use, but a "single wireless microphone system generally consists of as many as 8-10 microphones, although for large event productions the number of microphones could be in excess of 40."[202] Audio-Technica states that "even if all 400,000 of the microphones whose existence is postulated by the article were unlicensed (a point which A-T does not concede and which is contradicted elsewhere in the article) the number of unlicensed wireless microphone systems would be some fraction of that number."[203] Audio-Technica

[196] *See* PISC Petition at iv-vi, 16.

[197] *See id.* at ii, 27-33.

[198] *See id.* at 32; PISC et al. Apr. 22 *Ex Parte* at 1; *see also* State of California Comments at 2 (supporting PISC's proposal for a GWMS licensed by rule).

[199] *See* PISC Petition at vi (quoting Paul D. Lehrman, "Can You Hear Me Now? The Wireless Crunch Is Coming," Mix Magazine, May 1, 2006, available at http//mixonline.com/mag/audio_hear_2/index.html (last visited July 9, 2008)).

[200] *Id.*

[201] Audio-Technica Comments at 18 (footnote omitted).

[202] *Id.*

[203] *Id.* at 18-19.

also asserts that the number of Part 74 licensees is likely much smaller than the number of wireless microphone systems used by these licensees: "BAS operations are licensed on a geographic basis which, in some cases, is nationwide. A single user may operate any number of wireless microphone systems within its licensed geographic area, meaning there are far fewer users than systems."[204]

73. The Commission received numerous comments relatmg to use of wireless microphones by currently unauthorized users, and how best to address the issues raised in this proceeding. We note that many of the comments include discussion of the *TV White Spaces Second Report and Order*, where the Commission adopted certain rules applicable to the TV bands and the operation of TV Band Devices on an unlicensed basis under Part 15.

74. A number of parties urge the Commission to authorize wireless microphones in a manner that affords them protection from interference from unlicensed TV Band Devices in the core TV bands. Wireless microphone users, MSTV, and Motorola assert that the Commission should expand eligibility for Part 74 licenses to varying degrees.[205] The Coalition of Wireless Microphone Users (CWMU) states that its members are seeking protection from interference by TV Band Devices and that this protection can most effectively come from "eligibility for Part 74 Subpart H licenses and from the inclusion of Wireless Microphone uses in the proposed White Spaces database."[206] CWMU proposes expanding eligibility to include "[p]roducers of live performing arts, cultural presentations (including religious presentations), professional or amateur sporting events, conventions or trade shows, or the owners or

[204] *Id.* at 19 (footnote omitted).

[205] *See, e.g.,* CWMU Feb. 13 *Ex Parte* at 3; MSTV Sept. 25 *Ex Parte* at 2; Motorola Aug. 6 *Ex Parte*, Attachment; *see also* AMEC June 10 *Ex Parte* (supporting CWMU and stating that houses of worship should be eligible for Part 74 licenses and should be permitted to register in the TV white spaces database); Letter from John Connolly, Executive Director, Actors' Equity Association, to Marlene H. Dortch, Secretary, FCC, Ex Parte in WT Docket Nos. 08-166 and 08-167 (filed June 24, 2009) ("Actors Equity June 24 *Ex Parte*") (supporting CWMU with respect to expansion of Part 74 license eligibility; Actors' Equity is "the labor union representing Actors and Stage Managers in the legitimate theatre"); Letter from Andrea Snyder, Chair, Performing Arts Alliance; Teresa Eyring, Executive Director, Theatre Communications Group; Ann Meier Baker, President and CEO, Chorus America; Sandra Gibson, President and CEO, Association of Performing Arts Presenters; Joanne Hubbard Cossa, CEO, American Music Center; Jesse Rosen, President and CEO, League of American Orchestras; Kathy Evans, Executive Director, National Alliance for Musical Theatre; Marc Scorca, President and CEO, OPERA America, to Marlene H. Dortch, Secretary, FCC, Ex Parte in WT Docket Nos. 08-166 (filed Feb. 27, 2009) ("Performing Arts Alliance Feb. 27 *Ex Parte*") at 1 (supporting CWMU's request that the Commission "recognize the performing arts as eligible users of Subpart H frequencies"); MSTV/NAB Comments at 9 (urging Commission to expand Part 74 eligibility); Fox Television Stations Reply Comments at 2 (supporting MSTV/NAB comments). PSAV Presentation Services asserts that it is "imperative to identify an adequate number of protected channels in each market that wireless microphones could operate on free from white space device interference" and that "[t]hese protected channels are necessary to support the significant daily use of smaller numbers of wireless microphone channels that requires flexibility that make up the majority of our daily meeting events." *See* Letter from Annette M. Moody, SVP, Product Management, PSAV Presentation Services, to Chairman Martin and Commissioners Adelstein, Copps, McDowell, and Tate, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket 04-186 (filed Oct. 28, 2008) ("PSAV Oct. 28 *Ex Parte*"). Thomas Smith states that "change[s] in the rules could be made to allow churches, bands, theatres and others" to use wireless microphones in the TV bands and suggests an automated online registration system rather than formal licensing for these users. Thomas Smith Comments at 4-5.

[206] Letter from David H. Pawlik, counsel to The Coalition of Wireless Microphone Users, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket Nos. 04-186 and 02-380 (filed Aug. 28, 2009) ("CWMU Aug. 28 *Ex Parte*") at 2.

operators of venues where such events take place; or government or educational entities."[207] CWMU argues that placing wireless microphones on equal footing with TV Band Devices or Part 15 devices "would essentially provide no protection at all from the technology most likely to interfere with Wireless Microphone performance" because "temporary interference would not have the same devastating [effect] on TVBDs that it would have on Wireless Microphones."[208] As a result, TV Band Device operators "would begin any interference negotiation with much less to lose and thus a significant advantage."[209] This, CWMU argues, "would make it impossible to secure investor backing for high-quality Broadway productions while simultaneously subjecting communications at major sporting events, churches and college classrooms to untenable interference."[210]

75. MSTV asserts that the Commission should expand license eligibility to include "theaters, live music producers, government bodies, and houses of worship" and that these uses occur in a controlled environment that is "not typically in close proximity to television reception equipment."[211] MSTV asserts that wireless microphones need protection from the new TV Band Devices that "may flood the broadcast spectrum in the coming years" and that "[p]roviding them with only 'co-equal' status to TV Band Devices would be the end of the road for many wireless microphones."[212] MSTV also asserts that by licensing these wireless microphones, "the Commission will subject them to the coordination requirements of Part 74 and thereby greatly reduce the risk of interference to television reception."[213] Motorola, in a proposal that includes a number of measures related to the operation of wireless microphones and TV Band Devices, suggests that the Commission modify Part 74 of the rules to authorize licensed use of vacant channels between 37 and 51 in support of "live broadcast or professional

---

[207] *See* CWMU Feb. 13 *Ex Parte* at 3. CWMU also proposes a limited 60-day amnesty period during which existing wireless microphone users could apply for licenses to cover their grandfathered uses of the television broadcasting spectrum; following the termination of the amnesty period, the Commission could issue additional authorizations by waiver to ensure that only those entities that need wireless microphones using Part 74 spectrum are licensed, while reserving spectrum resources for use by TV Band Devices. Letter from Antoinette Cook Bush, Counsel to The Coalition of Wireless Microphone Users, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket Nos. 04-186 and 02-380 (filed June 25, 2009) ("CWMU June 25 *Ex Parte*") at 2. In addition, CWMU suggests clarifying that licenses should not be available for users that are not serving groups and/or can use a wired microphone. *Id.*

[208] CWMU June 25 *Ex Parte* at 4.

[209] *Id.*

[210] *Id.* CWMU also states that its members appreciate the importance of clearing the 700 MHz Band and have purchased new equipment to do so. "Given this commitment and expense, it would be manifestly unfair" for the Commission to require co-equal status for wireless microphones with other Part 15 devices. *See id.* at 3. CWMU also asserts that "failure to protect Wireless Microphones would be a reversal of the FCC's position in the White Spaces order, which made clear that Wireless Microphones could be included in the database and protected against interference from [TV Band Devices]." *Id.* at 3-4; *see also* Letter from Chuck Wilson, Executive Director, National Systems Contractors Association, to The Hon. Julius Genachowski, Chairman, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket No. 04-186 (filed July 24, 2009) ("NSCA July 24 *Ex Parte*") at 1, 2 (NSCA is "the leading not-for-profit association representing the commercial electronic systems industry"; co-equal operation of wireless microphones and TV Band Devices would mean that "any of the new electronic devices being developed would be able to interfere with wireless microphone systems" and would "ruin the experience for anyone using the microphones").

[211] MSTV Aug. 25 *Ex Parte* at 3.

[212] *Id.*

[213] *Id.*

entertainment venues."[214]

76. Wireless microphone manufacturers generally support PISC's proposal for licensing by rule but oppose its proposal that these microphones operate on a co-equal basis with TV Band Devices.[215] Sennheiser states that co-equal status for wireless microphones and TV Band Devices would require them to accept one another's interference and that in practice, this would "greatly impair wireless microphones while leaving [TV Band Devices] almost unaffected."[216] Shure supports expanded eligibility for licenses under Part 74, with licensing by rule for the remaining wireless microphone users.[217] Shure also states that wireless microphones cannot tolerate interference from TV Band Devices and that while it may be possible for the user of a TV Band Device to pinpoint potential interference arising from a wireless microphone operating in a nearby location, "the reverse is not true as wireless microphone users will not be able to identify the interfering [TV Band Device] user in a crowd, across the street from a church, or in a business conference."[218] In addition, Shure asserts that wireless microphone users typically operate at power levels well below those allowed for TV Band Devices and that "during inevitable incidents of co-channel interference, the outcome would almost always favor the more powerful [TV Band Device]."[219]

77. On the other hand, a number of parties urge the Commission not to allow substantial numbers of unauthorized wireless microphones to operate in the core TV bands with protection from potential interference from TV Band Devices. Google, Dell, and Microsoft, which are members of the White Spaces Coalition,[220] oppose any substantial expansion of Part 74 eligibility on the ground that it

[214] Motorola Aug. 6 *Ex Parte*, Attachment. Motorola also proposes that "[o]ther than temporary use, e.g., for [electronic news gathering], license entries in the [white spaces] database must be location and channel specific." *Id.*

[215] *See* Sennheiser Comments at 11-14 (opposing co-equal status for wireless microphones and white spaces devices and proposing that Part 74 licensed operation be permitted on channels 14-51, excluding 37, while GWMS operation would be limited to channels 14-36 and would be secondary to Part 74 licensed operations); Nady Comments at 10 (previously unlicensed wireless microphones should be licensed by rule for operation in the TV bands below 700 MHz; "[a]ll wireless microphone use in the white spaces will require protection from interference by the emerging technology commercial devices being considered by the Commission in [the white spaces proceeding]"); *see also* Audio-Technica Comments at 13 (stating that PISC's proposal for a GWMS is a creative solution to address the problem of unauthorized wireless microphone use).

[216] Letter from Mitchell Lazarus, Counsel to Sennheiser, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket Nos. 04-186 and 02-380 at 2 (filed July 7, 2009) ("Sennheiser July 7 *Ex Parte*") at 2 (footnote omitted). Sennheiser also asserts that wireless microphones are "entitled to retain their long-held interference protection from unlicensed devices, including [TV Band Devices.]" *Id.* at 4.

[217] *See* Shure Reply Comments at iii, 17-18.

[218] *See* "Ex Parte Comments of Shure Incorporated," *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket No. 04-186 (filed June 29, 2009) ("Shure June 29 *Ex Parte* Comments") at 5.

[219] *Id.* (footnote omitted). Shure also asserts that adoption of a licensing by rule regime without interference protection for wireless microphones would be inconsistent with the purpose of Section 307(e) and with Commission precedent, *see id.* at 2-4, and that "[d]emoting wireless microphones to 'co-equal' status with Part 15 TVBDs fundamentally conflicts with the Commission's long-standing mandate to protect *all* incumbent operators -- including wireless microphones -- in the core TV bands from interference created by new entrants." *Id.* at 8 (footnote omitted).

[220] *See* Letter from Edmond J. Thomas, Senior Technology Policy Advisor, Harris, Wiltshire & Grannis LLP, on behalf of White Space Coalition, *Ex Parte* in ET Docket Nos. 04-186 and 02-380 (filed July 16, 2007) ("White Spaces Coalition July 16 *Ex Parte*"). The White Spaces Coalition states in this filing that its members include Dell, Inc., EarthLink, Inc., Google, Inc., Hewlett-Packard Co., Intel Corp., Microsoft Corp., and Philips Electronics North America Corp.

could greatly undermine the operation of TV Band Devices.[221] Google states that it supports PISC's Petition and that any "considerable expansion" of the Part 74 eligibility rules could have a "hugely detrimental impact" on the use of TV Band Devices.[222] Microsoft and Dell assert that expanding Part 74 eligibility to include non-broadcast wireless microphones "will dramatically increase the number of white space database 'keep out' zones. It could mean that every karaoke club, corporate boardroom, theater, or meeting hall in the United States could receive the same protection as Yankee Stadium. As a result, the use of white space devices would be restricted in large areas of the country, and there would be many portions of densely populated areas where no white space devices could function at all."[223] In a separate *ex parte* filing, Microsoft asserts that "any post hoc authorization of currently unauthorized wireless microphones that the Commission determines is necessary should be narrow, well defined, and limited" and that "currently unauthorized microphones should not be licensed by rule given current white spaces rules."[224]

78. PISC, Verizon, and Public Knowledge argue that wireless microphones should be authorized to operate in the core TV Bands, but only on a co-equal basis with TV Band Devices.[225]

---

[221] *See* Letter from Richard S. Whitt, Esq., Washington Telecom and Media Counsel, Google Inc., to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket No. 04-186 (filed Apr. 24, 2009) ("Google Apr. 24 *Ex Parte*") at 1-2; Letter from Kerry Murray, Senior Counsel for Global Public Policy, Dell Inc., and Paula Boyd, Regulatory Counsel, Microsoft Corp., to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167, ET Docket Nos. 04-186 and 02-380 (filed May 6, 2009) ("Dell and Microsoft May 6 *Ex Parte*") at 1-2. In comments filed before release of the *TV White Spaces Second Report and Order*, the White Spaces Coalition proposed a narrow expansion of Part 74 license eligibility and opposed a GWMS that would allow wireless microphone users to operate in the spectrum at channels 21-51. White Spaces Coalition Comments at 2-3, 8-11. In a subsequent *ex parte* filing, Dell and Microsoft assert that the Coalition initially proposed a limited expansion of Part 74 under the assumption that these microphone uses would be protected using only spectrum sensing technology. In light of the "stringent" wireless microphone protection rules adopted in the *TV White Spaces Second Report and Order*, however, "any expansion of Part 74 now represents a critical problem for the availability of white spaces devices." Dell and Microsoft May 6 *Ex Parte* at 2 n.5.

[222] *See* Google Apr. 24 *Ex Parte* at 1-2.

[223] Dell and Microsoft May 6 *Ex Parte* at 2 (footnote omitted); *see also* Dane Ericksen Reply Comments at 5 (Commission should not expand Part 74 eligibility at a time when the frequencies available to low power auxiliary stations are decreasing as a result of the DTV transition). CTIA does not take a position on whether currently-unauthorized wireless microphones should operate on a co-equal basis with TV Band Devices but argues that the Commission must allow these users to "transition into alternative spectrum readily available for such operations – the TV bands." CTIA May 15 *Ex Parte* at 1.

[224] Letter from Edmond J. Thomas, Senior Technology Policy Advisor, Harris, Wiltshire & Grannis LLP, on behalf of Microsoft Corp., *Ex Parte* in WT Docket Nos. 08-166 and 08-167, ET Docket Nos. 04-186 and 02-380 (filed Apr. 17, 2009) ("Microsoft Apr. 17 *Ex Parte*") at 1.

[225] *See* PISC et al. Apr. 22 *Ex Parte* at 1; Letter from Adam D. Krinsky, Counsel to Verizon Wireless, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167; ET Docket Nos. 02-380 and 04-186 (filed July 16, 2009) ("Verizon Wireless July 16 *Ex Parte*") at 2 n.7 (citing Letter from John T. Scott, III, VP and Deputy General Counsel, Verizon Wirelesss, to Marlene H. Dortch, Secretary, FCC, *Ex Parte,* in WT Docket Nos. 08-166, 08-167 and ET Docket Nos. 02-340, 04-186 (filed June 8) ("Verizon Wireless June 8 *Ex Parte*") at 3-5); Letter from Harold Feld, Legal Director, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167, ET Docket No. 04-186 (filed June 18, 2009) ("Public Knowledge June 18 *Ex Parte* at 1. *See also* Google Apr. 24 *Ex Parte* at 2 (suggesting that it may be an option to establish "a 'license by rule' that gives wireless microphones no greater protection outside the 700 MHz bands than has been granted to [TV Band Devices], and granting the wireless microphones a permanent safe harbor in every market, at the first two available channels outside Channel 37").

According to PISC, allowing a significant number of new users to be licensed as Part 74 low power auxiliary stations and then included in the database of licensed station devices that must be protected against harmful interference would effectively eliminate the channels available for TV Band Devices in a number of major cities, crippling the viability of these devices and making national network offerings an impossibility.[226] PISC also suggests that, to the extent a limited set of wireless microphone users can make a showing of actual harmful interference to wireless microphones from TV Band Devices and thus the need for additional licensed protection under Part 74, the Commission could consider such requests pursuant to waiver requests.[227] Verizon Wireless proposes that the Commission permit currently unauthorized wireless microphone users to operate lawfully in the TV band spectrum "pursuant to either Section 307(e) authorization by rule or Part 15, with co-equal status to the TV Band Devices."[228] Public Knowledge proposes "[i]n addition to licensing by rule, . . . authorizing wireless microphones pursuant to Part 15. Entities qualifying for licenses under Part 74 would still receive them, and be entitled to protection as licensed users. Members of the public would be able to legally use wireless microphones (operating below Channel 52) as well, subject to the usual restrictions on the use of unlicensed devices."[229]

79. A numher of parties raise procedural arguments with respect to unauthorized wireless microphones. Dell and Microsoft argue that any matter related to wireless microphones that will affect white spaces technologies should be decided in the white spaces proceeding or, at a minimum, should be decided only once the open issues in that proceeding have been resolved.[230] Dell and Microsoft also assert that under the Administrative Procedure Act and the Commission's rules, "most or all of these matters must be subject to a separate public notice in any event."[231] Shure argues that "[n]ew proposals to revise the regulation of wireless microphones in the core TV bands would be unexpected, and not 'consistent with the issues and questions posed in the notice[s]' in the underlying proceedings."[232] Verizon Wireless, on the other hand, argues that the Commission has provided sufficient notice to adopt a Part 15 regime for currently-unauthorized wireless microphones.[233] Verizon Wireless and Shure also suggest that the Commission at this stage of the proceeding could adopt measures allowing wireless microphones to transition out of the 700 MHz Band and then could consider additional rules for wireless

[226] *See* PISC et al. Apr. 22 *Ex Parte* at I.

[227] *Id.*

[228] Verizon Wireless July 16 *Ex Parte* at 2 n.7 (citing Verizon Wireless June 8 *Ex Parte* at 3-5).

[229] Public Knowledge June 18 *Ex Parte* at 1; *see also* Letter from Michael Weinberg, Law Clerk, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167, ET Docket No. 04-186, MB Docket Nos. 08-82 and 97-80, and WC Docket No. 08-7 (filed Sept. 16, 2009) ("Public Knowledge Sept. 16 *Ex Parte*") (suggesting that "one way to resolve the wireless microphone issue would be to reclassify devices under Part 15").

[230] Dell and Microsoft May 6 *Ex Parte* at 3; *see also* Google Apr. 24 *Ex Parte* at 2 (asserting that "any issues surrounding granting more expansive rights to wireless microphones in the TV White Spaces bands properly should be decided in [the white spaces proceeding]").

[231] Dell and Microsoft May 6 *Ex Parte* at 3 n.8 (citing 5 U.S.C. § 553(b)(3) and 47 C.F.R. § 1.413(c)).

[232] Shure June 29 *Ex Parte* Comments at 8-9 (footnote omitted).

[233] Verizon Wireless June 8 *Ex Parte* at 5 (footnote omitted) (asserting that "there can be no doubt that a Part 15 regime, with wireless microphone operations subject to the technical rules of Part 74 LPAS devices in the TV Bands, is a 'logical outgrowth' of the NPRM") (footnote omitted); *see also* CTIA May 15 *Ex Parte* at 3 (the Commission "clearly has provided sufficient notice to transition licensed and unauthorized wireless microphone services out of the 700 MHz bands and into the TV bands") (footnote omitted).

microphones in a subsequent step.[234]

80. In its Petition, PISC also requested that the Commission grant a "general amnesty" to all unauthorized users of wireless microphones "deceived by the illegal and deceptive marketing of manufacturers," and permit such users to operate on a going forward basis until the Commission authorizes them under the proposed GWMS.[235] PISC also requested that the Commission require those manufacturers that PISC alleges "engaged in illegal marketing" to migrate the unauthorized users of Part 74, Subpart H equipment to the new GWMS by replacing equipment, and begin an investigation against Shure, Inc., and the other manufacturers listed in its informal complaint for their marketing, selling, and advertising practices.[236] In the *Notice*, the Commission noted that its Enforcement Bureau last year initiated an investigation relating to the marketing practices of various manufacturers of wireless microphones.[237]

81. Discussion. We conclude that it serves the public interest to waive two of our Part 15 rules, to permit unauthorized users of low power auxiliary stations, including wireless microphones, to operate on an unlicensed basis under Part 15 pursuant to certain specified technical requirements, in the 700 MHz Band until June 12, 2010 and in the core TV bands until the effective date of Commission action taken in response to the Further Notice.[238] Accordingly, we waive Sections 15.201(b) and

[234] *See* Verizon Wireless July 16 *Ex Parte* at 2-3 n.7, 4 (the Commission should allow currently unauthorized wireless microphone users to operate lawfully in the TV bands "pursuant to either Section 307(e) authorization by rule or Part 15, with co-equal status to the TV Band Devices," and "could then engage in a follow-on proceeding to assess whether some subset (or all) of the currently unauthorized wireless microphone users should be entitled to interference protections from TV Band and other devices through Part 74 LPAS licensing or some other means") (citing Verizon Wireless June 8 *Ex Parte* at 3-5); Verizon Wireless July 27 *Ex Parte* at 2 (the Commission should "initiate a follow-on proceeding to address interference protection rights, to be concluded well before TV Band devices are introduced into the marketplace") (footnote omitted); Letter from Catherine Wang, Counsel to Shure, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167, and ET Docket No. 04-186 (filed May 20, 2009) ("Shure May 20 *Ex Parte*") (meeting with Acting Chairman Copps' staff) at 1 (the Commission "can issue an order appropriately addressing the principal issue in the proceeding -- that is, whether and on what terms and conditions secondary low power auxiliary service devices, including wireless microphone systems, should migrate out of the 700 MHz band -- without addressing other issues collateral to the proposed migration including whether and how to reclassify various uses of wireless microphones under the Commission's Part 74 rules"); Shure July 27 *Ex Parte* at 1 (the Commission should identify the date by which wireless microphone operations must transition out of the 700 MHz Band but need not delay that step while it considers other issues, "including whether and how to reclassify various uses of wireless microphones under the Commission's Part 74 rules").

[235] *See* PISC Petition at i-ii.

[236] *See id.*; *see also* Public Knowledge et al. Apr. 15 *Ex Parte* at 1 (wireless microphone manufacturers should offer trade-in programs for unlicensed users who purchased these devices). Public Knowledge in a subsequent *ex parte* filing argues that the current refund programs offered by some manufacturers under which unauthorized users exchange equipment for a discount on new equipment "constitute an unjust enrichment to the manufacturers whose illegal marketing practices created this problem in the first place." Public Knowledge June 18 *Ex Parte* at 1. Public Knowledge argues that the Commission should address this by requiring "a mandatory recall and replacement by manufacturers with equipment operating on permitted channels." *Id.*

[237] *Notice* at ¶ 22.

[238] We anticipate that such unlicensed operations in the core TV bands pursuant to waiver will remain in place only for a short period of time, as we intend to act expeditiously on our proposal to promulgate final rules.

15.209(a)[239] of our Part 15 technical rules. These waivers will permit entities that operate wireless microphones in the 700 MHz Band without the required license to continue those operations subject to the band clearing mechanisms that we adopt in this Report and Order,[240] and permit them to relocate their operations to the core TV bands on the same Part 15 unlicensed basis. The waivers also will permit operation of wireless microphones outside of the 700 MHz Band without the required authorization. The operation of wireless microphones in the 700 MHz Band under these limited term waivers will be subject to the band clearing mechanisms we adopt in this Report and Order. Thus, all entities may continue operating wireless microphones in the 700 MHz Band until June 12, 2010, unless they must cease operations sooner under the early band clearing mechanisms discussed above. During the temporary waiver period, any entity that chooses to operate a wireless microphone under these waivers must comply with the waiver conditions, including compliance with specified technical requirements that are identical to those we are proposing in the Further Notice for the operation of wireless microphones under Part 15.[241]

82. Under these waivers, wireless microphones may be operated as Part 15 devices without a license in the 700 MHz Band under the conditions adopted in this Report and Order, and they can also operate in the core TV bands. Operation under these waivers is subject to the following conditions. First, the wireless microphones must comply with specified technical requirements under Part 15, which are the same technical rules that we are proposing in the Further Notice for wireless microphone operations under Part 15 (as set forth in Appendix E, below). Second, the devices must be certificated under the rules applicable to certification under our Part 74, Subpart H rules. Third, the devices shall not cause harmful interference and must accept any interference received pursuant to Section 15.5 of our Rules.[242] Finally, users operating in the 700 MHz Band must comply with the conditions for continued operation in that band during the transition period, including the early clearing procedures discussed above.[243] The waivers will be effective upon the release of the Report and Order.

83. Section 1.3 of the Commission's rules provides that "[a]ny provision of the rules may be waived by the Commission on its own motion or on petition if good cause therefor is shown" subject to the provisions of the APA and its own rules.[244] Waiver is appropriate when "particular facts would make strict compliance inconsistent with the public interest."[245] A waiver cannot undermine the purposes of the

[239] 47 C.F.R. §§ 15.201(b), 15.209(a). Section 15.201 requires intentional radiators operating under Part 15 to be certificated for operation under this part. Section 15.209(a) prohibits operation of Part 15 devices in the TV bands and at field strengths greater than specified in the table unless specifically permitted elsewhere in Part 15.

[240] *See supra* Section III.A. Under those procedures, entities currently operating Part 74 low power auxiliary devices, including wireless microphones, in the 700 MHz Band may continue to operate in the 700 MHz Band until June 12, 2010, subject to the conditions set forth in this Report and Order.

[241] *See infra* Appendix E. *Cf.* Amendment of Part 101 of the Commission's Rules to Accommodate 39 Megahertz Channels in the 6525-6875 MHz Band; Amendment of Part 101 of the Commission's Rules to Provide for Conditional Authorization on Additional Channels in the 21.8-22.0 GHz and 23.0-23.2 GHz Band; Fixed Wireless Communications Coalition Request for Waiver, *Notice of Proposed Rulemaking and Order* in WTB Docket No. 09-114 and RM-11417, at paras. 23-24 (released Jun. 29, 2009) (granting request for waiver of Section 101.31(b)(vii) to allow for conditional authority under conditions that were proposed as rule changes in the *NPRM* portion of the decision).

[242] 47 C.F.R. §§ 15.5(b) and 15.5(c). The operator of a wireless microphone shall be required to cease operation upon notification by a Commission representative that the device is causing harmful interference.

[243] *See supra* Section III.A.

[244] 47 C.F.R. § 1.3.

[245] *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.[246] As discussed below, we find that good cause exists to waive Sections 15.201(b) and 15.209(a)[247] of our Part 15 technical rules in order to allow operation of wireless microphones in the 700 MHz Band and the core TV bands for a limited period.

84. We are allowing operation of wireless microphones under these waivers to use a power of up to 50 milliwatts.[248] The waivers should allow wireless microphones to operate outside of the 700 MHz Band in a manner that is largely consistent with their current operations. While Part 74 rules permit wireless microphones to operate on VHF TV channels with a power level to the antenna of 50 milliwatts and on UHF channels with a power level of 250 milliwatts,[249] two equipment manufacturers indicate that the actual power levels for most wireless microphones operating in the 700 MHz Band are in the 10-50 milliwatts range.[250] We also note that a large majority of wireless microphones are certificated to operate with a power level of 50 milliwatts or less. These appear to be the most popular devices because the 50 milliwatts or less is sufficient for most uses and extends battery life. While some wireless microphones operate at power levels of 250 milliwatts, it appears most of these devices are used for professional applications requiring a longer operating range with a short duration of operation, such as electronic news gathering or movie production users that hold Part 74 authorizations. In this regard, we note that devices authorized under Part 74 as low power auxiliary stations are "intended to transmit over distances of approximately 100 meters"[251] and may operate with a power level of 250 milliwatts. We anticipate that wireless microphones operating up to 50 milliwatts under the terms of this waiver would transmit over a shorter distance.[252] Therefore, we believe that the operations that we are allowing under the waivers will effectively accommodate users that are currently unauthorized. We are not extending the waiver to permit these wireless microphone users to operate at power levels higher than 50 milliwatts because, unless operated on a licensed basis pursuant to Part 74 requirements, use of these devices generally poses a greater interference risk to TV band licensees.[253]

85. We recognize, however, that there may be instances where operation at a power level higher than 50 milliwatts may be needed and can be allowed without causing interference.[254] We find that such instances should be evaluated based on their individual facts and circumstances to ensure that interference will not occur. We therefore are granting delegated authority to our Office of Engineering and Technology and Wireless Telecommunications Bureau to modify the limited waiver of the Part 15 rules on a case-by-case basis to permit entities to operate wireless microphones at power levels higher than 50 mW where it can be shown there is no significant risk of harmful interference to other users of the

---

[246] *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

[247] 47 C.F.R. §§ 15.201(b), 15.209(a).

[248] *See infra* Appendix E.

[249] *See* 47 C.F.R. §74.861(e)(1).

[250] *See* Shure Reply Comments at 13; *see also* Nady Comments at 7-8 (commenting that in practice, wireless microphones' actual output is generally only a maximum of 15 milliwatts).

[251] *See* 47 C.F.R. § 74.801 (definition of "low power auxiliary station").

[252] Transmit distance, *i.e.*, service range, would be affected by a number of conditions, but we expect that the transmit distance would typically extend to about 50 meters.

[253] Only Part 74 licensees are permitted to operate their devices at power levels higher than 50 milliwatts.

[254] Letter from Catherine Wang, Counsel to Shure, to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket Nos. 08-166 and 08-167 (filed Jan. 14, 2010).

spectrum, particularly to TV broadcast service.

86. We find that good cause for a limited waiver exists in this particular case, given the totality of the circumstances including the short-term nature of these waivers and the need to facilitate clearing of the 700 MHz band for use by the public safety and commercial licensees.[255] We also find that it serves the public interest to provide access to other spectrum for entities that are operating wireless microphones in the 700 MHz Band while this rulemaking is pending.[256] Our primary goal in this proceeding is to clear all wireless microphones from the 700 MHz Band, thereby simplifying the process of making this spectrum fully available for public safety and commercial broadband licensees. In order to attain that goal, we intend to have any wireless microphone user, authorized or not, transition out of the 700 MHz band and onto other available frequencies no later than June 12, 2010. Granting these waivers will allow currently unauthorized users that vacate the 700 MHz Band to operate in the 700 MHz Band temporarily under the umbrella of unlicensed Part 15 operation. At the same time, the conditions we impose serve the public interest intent behind each of the two specific Part 15 rules being waived, which is to prevent interference to authorized radio services. The power limits, minimum co-channel TV broadcast station distance provisions, specific frequency operation, and out-of-band emissions limits[257] established herein provide safeguards to ensure that the policy objectives served by Sections 15.201(b) and 15.209(a) are met. Finally, we note that any operation of wireless microphones pursuant to the waivers is subject to the Section 15.5 interference restrictions.[258] Taken together, these safeguards ensure that any operation done pursuant to the waivers will not undermine the purposes of, and public interest protected by, Sections 15.201(b) and 15.209(a).

87. The record in this proceeding includes a number of comments that describe the need for and the significance of wireless microphones in providing quality audio technology for performances and programs in theaters, classrooms, lecture halls, houses of worship, stadiums, and other venues.[259] We find that temporarily waiving these two rules in order to permit the continued operation of wireless microphones, including wireless microphones that are used for these purposes, pending our final

[255] For the same reasons that we find good cause exists for granting this waiver, as discussed in this Report and Order, we have determined that there would be good cause under Section 553(b)(3)(B) of the APA, 5 U.S.C. § 553(b)(3)(B), for establishing interim rules that permit the same range of operations as the waiver.

[256] *See* CTIA May 15 *Ex Parte* at 1 (suggesting that "unauthorized wireless microphone users be licensed by rule in the TV bands with co-equal status to approved TV band devices"); Verizon Wireless June 8 *Ex Parte* at 4-5 (noting use of Part 15).

[257] *See infra* Appendix E (proposed rules 15.3 and 15.238).

[258] 47 C.F.R. § 15.5.

[259] For example, Nady comments that wireless microphones "are an essential part of audio recordings, houses of worship, political town-hall meetings, live music concerts, courthouses, television broadcasts, film productions, live theatrical performances, business presentations, teaching hospitals and sports events to name a few." Nady Comments at 3. Shure comments that the activities at which wireless microphones are used "are socially, culturally, and economically important to the public interest in the United States." Shure Comments at 3. The African Methodist Episcopal Church states that "[h]ouses of worship rely upon these microphones almost daily and the freedom of movement and crisp sound afforded by modern systems is absolutely essential for our sermons, lectures and musical celebrations." AMEC June 10 *Ex Parte* at 2. CWMU states that "theatre organizations . . . regularly employ wireless microphones in their presentations to the public." CWMU March 17 Ex Parte at 1. In addition, a number of parties have pointed out that wireless microphones provide significant safety benefits for performers and event staff. *See, e.g.*, CWMU Feb. 13 *Ex Parte* at 2 n.1 (wireless microphones "creat[e] a far safer work environment for performers and presenters by providing the freedom to move about safely and quickly through stage environments and other settings"); Nady Comments at 3 (use of wireless microphones "has reduced the incidence of electric shock to performers and tripping over cords").

decisions of the issues raised in the Further Notice will provide this Commission with the opportunity to develop a full and balanced record before it adopts final, comprehensive rules that address the operation of wireless microphones by those entities that lack the required license. In addition, we note that some entities will be acquiring new wireless microphone equipment to operate in bands outside of the 700 MHz Band to replace their existing equipment, while some equipment that operates in the 700 MHz Band may be capable of being modified to operate in the core TV band spectrum. The waivers permitting operations will allow at least some of these users to make informed decisions with respect to new equipment purchases, or where applicable the modification of existing equipment, until the issues raised in the Further Notice are resolved. We emphasize that there are a variety of unique facts surrounding grant of this waiver, and we do not anticipate that we will soon encounter such a convergence of factors as these to warrant the type of accommodation afforded here.

88. While we find good cause for granting the limited term waivers, as discussed above, we stress that these waivers are temporary and that the granting of these waivers will not prejudice the outcome of this proceeding or otherwise limit the Commission's choices therein. Under this approach, we will be able to compile a record and consider more fully the issues and proposals in response to the Further Notice concerning currently unauthorized users of wireless microphones, including whether to expand eligibility for licenses under Part 74.

89. In order to address the potential for interference from the operation of wireless microphones in the core TV Bands, we require that all wireless microphones operating under the waivers are subject to the same technical limitations that we are proposing in the Further Notice for the operation of "Wireless Audio Devices" under Part 15. These technical rules provide for distances from existing co-channel TV broadcast stations, specific frequency operation, power limits, and out-of-band emissions.[260] In addition, the unlicensed operators of wireless microphones that operate under the waivers will be subject to the restrictions in Part 15 of the rules.[261] The immediate and potential future harm to current TV band licensees of continued widespread use of previously unauthorized wireless microphones appears to be negligible, in light of the conditions we are imposing on the waivers, including that the wireless microphones must comply with the specified technical requirements (consistent with those proposed for Part 15 wireless microphone operations in the core TV bands, as set forth in Appendix E) and that they must not cause harmful interference to licensed TV band users.[262] We note that licensees that operate low power auxiliary devices under Part 74 authorization will still receive interference protection with respect to wireless microphones that will be operating through these temporary waivers as unlicensed devices.

90. Given the actions we are taking today, we do not adopt PISC's remaining proposals, including that we provide a "general amnesty" to certain unauthorized wireless microphone users. We find that various steps that we are taking today appropriately address, on a going forward basis, the issues relating to the proliferation and use of wireless microphones that have not heretofore been authorized.[263] Finally, we do not rule at this time on PISC's proposal to create a General Wireless Microphone Service

[260] *See infra* Appendix F (proposed rules 15.3 and 15.238).

[261] *See, e.g.,* 47 C.F.R. § 15.5(b) (providing that the operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator).

[262] TV band licensees include full service TV stations, Class A TV stations, low power TV stations, TV translator and booster stations, broadcast auxiliary stations and private land mobile and commercial mobile radio service stations.

[263] We do not address at this time questions relating to the unauthorized use of wireless microphones prior to our actions today.

that would be licensed by rule pursuant to Section 307(e) of the Act.[264] We instead seek to address its concerns in the order that considers the issues set forth in the Further Notice.

E. Disclosure Requirements and Consumer Outreach

91. Background. In its Petition, PISC asserted that wireless microphone manufacturers knowingly marketed and sold wireless microphones to unauthorized users.[265] PISC stated that as a result of this conduct, unauthorized users unknowingly purchased and used wireless microphones in violation of the Commission's rules.[266] The Commission sought comment on this allegation in the PISC Petition.[267]

92. The record includes a number of comments and *ex parte* filings about the scope of the Commission's existing labeling requirements for wireless microphones and other low power auxiliary stations, and whether the Commission should adopt additional labeling requirements. In response to PISC's arguments about deceptive marketing by manufacturers, Audio-Technica asserts that the Commission's rules do not require manufacturers to label their products in a way that informs purchasers of the Commission's license requirement.[268] Dane Ericksen states that manufacturers are correct that, so long as a product has received equipment certification as a Part 74 device, "marketing and selling that device to ineligible and/or unlicensed parties is not illegal."[269] Dane Ericksen asserts that one solution would be for the Commission to require a plainly visible warning label for non-Part 15 wireless microphones. The label would warn buyers that an FCC license is required before the microphone can legally be used and that there are eligibility requirements associated with such a license.[270] As noted above, CTIA, APCO, NENA, and others jointly urge the Commission to adopt labeling requirements for 700 MHz wireless microphones bound for export so that consumers will understand that they cannot use these products in the United States.[271]

93. Some manufacturers of wireless microphone equipment and Verizon Wireless also note that manufacturers have made voluntary efforts to inform consumers about the use of the 700 MHz Band. PAMA notes in an *ex parte* filing that customer education efforts have been made concerning operation in the 700 MHz Band.[272] PAMA states that "[m]any manufacturers have devoted significant time and effort to guide customers to equipment using alternative frequency ranges and have restricted selling or made 700 MHz equipment available only on a special order basis."[273] In addition, we note that some manufacturers implemented rebate programs for the trade-in of 700 MHz Band wireless microphone

---

[264] *See* PISC Petition at i-ii.

[265] *Id.* at i, iv-vi, 5-15.

[266] *Id.* at viii-ix, 4, 18-19. PISC also proposed that the Commission adopt rules relating to the operation of wireless microphones by users who are currently unauthorized in the core TV spectrum below Channel 52. *Id.* at 22, 27-33.

[267] *See Notice*, 23 FCC Rcd at 13114-15 ¶¶ 20-22.

[268] *See* Audio-Technica Comments at 17.

[269] Dane Ericksen Reply Comments at 6.

[270] *Id.*

[271] *See* APCO et al. Apr. 7 *Ex Parte* at 4-5; *see also* Verizon Wireless Mar. 18 *Ex Parte* at 1 (Commission should ban the domestic manufacture and sale of wireless microphones and other devices capable of operating in the 700 MHz Band "with appropriate labeling requirements for any devices manufactured for export").

[272] PAMA Jan. 5 *Ex Parte* at 2-3.

[273] *Id.* at 3 n.5.

equipment.[274] Verizon Wireless also states that wireless microphone manufacturers are engaged in educational efforts to alert their customers, or potential customers, of "the need to cease operations in the 700 MHz Band," and asserts that these efforts, as well as education and rebate information, "could serve as an effective complement to the FCC's consumer education program."[275]

94. Verizon Wireless, CTIA, and other organizations urge the Commission to issue a consumer advisory to alert the public of the need to clear the 700 MHz Band as a part of the DTV transition.[276] Verizon notes the importance of a consumer advisory "to alert all wireless microphone users, including those not authorized by the Commission, that as part of the DTV transition, the 700 MHz band must be cleared of TV stations *and* all other operations, including wireless microphone usage."[277] CTIA notes that the consumer advisory also could be used to disseminate information concerning steps consumers may take to address the use of low power auxiliary stations in bands other than the 700 MHz Band.[278] CTIA and public safety organizations state that a consumer advisory can also be used to notify equipment manufacturers and other parties of any prohibition on the manufacture, sale, or marketing of wireless microphones for use in the 700 MHz Band in the United States.[279]

95. Discussion. Based on this record, we adopt certain measures, including point-of-sale disclosure requirements, to address concerns regarding a lack of consumer awareness of our rules, so that we can best ensure the operation of wireless microphones and other low power auxiliary stations in conformance with the relevant policies and rules. Specifically, we adopt a disclosure requirement for anyone selling, leasing, or offering for sale or lease wireless microphones or other low power auxiliary stations that operate in the core TV spectrum. Under this requirement, manufacturers, dealers, distributors, and other entities that sell or lease these devices will have to display a Consumer Disclosure, at the point of sale or lease, informing consumers of the conditions that apply to the operation of wireless microphones in the core TV bands during the temporary waiver period. This disclosure requirement will apply until the effective date of the final rules addressing the issues raised in the Further Notice. In addition, we will implement a comprehensive consumer outreach program that will include a Consumer Fact Sheet and other consumer publications, as well as other steps on the part of the Commission, to complement the expected outreach and education efforts on the part of low power auxiliary station manufacturers.

96. *Disclosure Requirement.* We require anyone selling, leasing, or offering for sale or lease wireless microphones or other low power auxiliary stations that operate in the core TV bands to provide

---

[274] *See, e.g.*, 700 MHz Wireless Trade-In Program, Trade-in & Trade-up Your Wireless Offer, Valid: December 1, 2008 through December 31, 2009, Rebate Offer Form, Shure, at http://www.shure.com/stellent/groups/public/@gms_gmi_web_us_pro/documents/web_resource/us_pro_700mhz_rebate_r2.pdf; 700 MHz Band Rebate Program for Wireless Systems, Sennheiser Electronic Corporation, at http://www.sennheiserusa.com/press_archive_12162008 (noting that rebate claims must have been postmarked no later than December 15, 2009, and received by December 31, 2009 by Sennheiser). *See also* http://www.audio-technica.com/cms/news/9e4d4409a39b3a99/index.html (Audio-Technica's program requiring that discontinued products must have been turned in by September 30, 2009, for rebates that are good through December 31, 2009).

[275] Verizon Wireless Apr. 23 *Ex Parte* at 2; *see also* Shure May 20 *Ex Parte* at 2 (discussing providing an update on its efforts to educate wireless microphone users and dealers about the Commission's proposed rule changes).

[276] Verizon Wireless Apr. 23 *Ex Parte*; Verizon Wireless July 27 *Ex Parte* at 3-4; APCO et al. Apr. 7 *Ex Parte*; CTIA May 15 *Ex Parte*; CTIA Feb. 19 *Ex Parte*.

[277] Verizon Wireless Apr. 23 *Ex Parte* at 2.

[278] CTIA Feb. 19 *Ex Parte*.

[279] APCO et al. Apr. 7 *Ex Parte*.

certain written disclosures to consumers. These entities must display the Consumer Disclosure, the text of which will be developed by Commission staff, at the point of sale or lease,[280] in a clear, conspicuous, and readily legible manner. In addition, the Consumer Disclosure must be displayed on the website of the manufacturer (even in the event the manufacturer does not sell wireless microphones directly to the public) and of dealers, distributors, retailers, and anyone else selling or leasing the devices.

97. We take this step in recognition that a significant number of currently unauthorized users of wireless microphones and other low power auxiliary stations in the 700 MHz Band may have to purchase new equipment to transition into the core TV bands pursuant to our temporary waivers. Our intention in requiring display of the Consumer Disclosure is to make certain that these users understand their rights and obligations regarding the use of low power auxiliary stations in the core TV bands. For example, wireless microphone purchasers will need to know that they must not operate the device at a power level in excess of 50 milliwatts or in situations where it may cause harmful interference, and that they must accept any interference received from other devices. This Consumer Disclosure should help assure that purchasers of low power auxiliary stations operate their devices in a manner in compliance with our rules and policies and thereby do not cause interference to authorized radio services in the core TV bands.

98. We find that the only practicable way to ensure that users receive this information is to require clear disclosure at the point of sale or lease, and on manufacturer and distributor websites. A number of parties in comments and *ex parte* filings have urged the Commission to adopt labeling requirements so that users of wireless microphones and other low power auxiliary stations will be aware of eligibility requirements and other restrictions for the use of those devices.[281] We agree with these parties that disclosure requirements are necessary to ensure compliance with our rules and to help consumers operate the equipment in a manner that does not cause interference.[282]

99. We delegate authority to the Wireless Telecommunications Bureau and the Consumer and Governmental Affairs Bureau to prepare the specific language that must be used in the Consumer Disclosure and publish it in the Federal Register.

100. There is more than one way in which the point-of-sale Consumer Disclosure may be provided to potential purchasers or lessees of wireless microphones, but, as discussed above, each of them must satisfy all the requirements set out above, including that the disclosure be provided in writing at the point of sale in a clear, conspicuous, and readily legible manner. One way to fulfill this disclosure requirement would be to display the Consumer Disclosure in a prominent manner on the product box by using a label (either printed onto the box or otherwise affixed to the box), a sticker, or other means. Another way to fulfill the disclosure requirement would be to display the text immediately adjacent to each low power auxiliary station offered for sale or lease and clearly associated with the model to which it pertains. For wireless microphones offered online or via direct mail or catalog, the disclosure must be prominently displayed in close proximity to the images and descriptions of each wireless microphone.

---

[280] By "point of sale or lease" we mean the place where wireless microphones and other low power auxiliary stations are displayed or offered for consumers to purchase or lease.

[281] *See* Dane Ericksen Reply Comments at 6 (suggesting a label on non-Part 15 wireless microphones to warn consumers of license eligibility requirements); APCO et al. Apr. 7 *Ex Parte* at 4-5 (urging the Commission to adopt a labeling requirement for 700 MHz wireless microphones manufactured for export); Verizon Wireless Mar. 18 *Ex Parte* at 1 (Commission should adopt "appropriate labeling requirements" for 700 MHz devices manufactured for export).

[282] As noted above, we are adopting rules requiring the labeling of low power auxiliary stations, including wireless microphones, that are capable of operating in the 700 MHz Band and are destined for non-U.S. markets. *See supra* Section III.B.

This requirement will remain in effect until the effective date of final rules adopted in response to the Further Notice.

101. We will require manufacturers, dealers, distributors, and other entities that sell or lease wireless microphone devices for operation in the core TV bands to comply with the disclosure requirements no later than February 28, 2010, and we encourage these entities to provide consumers with the required information earlier.[283] In this Report and Order, we are taking steps to ensure that low power auxiliary stations, including wireless microphones, are cleared from the 700 MHz Band no later than June 12, 2010, so that public safety and commercial licensees will be able to operate without interference in the band. As noted above, many currently unauthorized users of wireless microphones and other low power auxiliary stations in the 700 MHz Band will have to purchase or lease new equipment to transition into the core TV bands, and the consumer disclosure will provide information on the operation of those devices in the core TV bands. We find that delaying the effective date of the disclosure rules until some later time would be contrary to the public interest.

102. *Consumer Outreach.* In addition, we find that several means should be employed to provide as much notice as possible to users of the need to clear the 700 MHz Band of low power auxiliary stations, including wireless microphones.

103. We will release consumer publications, including a Consumer Fact Sheet and answers to Frequently Asked Questions (FAQs), that inform the public of our decisions in this Report and Order. Specifically, the Consumer Fact Sheet will serve the public interest by explaining the need to clear the 700 MHz Band in order that the spectrum can be used for the provision of new public safety and commercial services. The Consumer Fact Sheet will explain that entities currently operating low power auxiliary stations, including wireless microphones, may continue to operate in the 700 MHz Band until June 12, 2010, subject to the conditions set forth in this Report and Order, including the early clearing mechanisms. The Consumer Fact Sheet will provide information concerning the early clearing mechanisms for the 700 MHz Band that we are adopting in this Report and Order. It will also inform the public how to use the Commission's website to view public notices that identify the markets in which 700 MHz licensees are initiating operations. In addition, the Consumer Fact Sheet will provide information concerning our decision to prohibit the manufacture, import, sale, lease, offer for sale or lease, or shipment of low power auxiliary stations for operation in the 700 MHz Band in the United States. We also will provide on our website answers to FAQs relating to this proceeding.

104. Commission staff also will identify and contact organizations that represent entities that are known to be users of low power auxiliary stations, including wireless microphones in the 700 MHz Band, including groups that represent theaters, houses of worship, and sporting venues. We will inform these entities of our decisions in this Report and Order, particularly the need to clear the 700 MHz Band in order that the spectrum can be used for the provision of new public safety and commercial services.

105. Further, we expect all manufacturers of wireless microphones and other low power auxiliary stations to make significant efforts to ensure that all users of such equipment capable of operating in the 700 MHz Band are fully informed of the decisions in this Report and Order. Specifically, we expect these manufacturers, at a minimum, to ensure that these users are informed of the need to clear the 700 MHz Band in order that the spectrum can be used for the provision of new public safety and commercial services. Manufacturers also should inform users of wireless microphones and other low power auxiliary stations that they may continue to operate in the 700 MHz Band until June 12, 2010, but

[283] This disclosure requirement requires approval from the Office of Management and Budget (OMB) as a new information collection under the Paperwork Reduction Act (PRA). We anticipate approval of the requirement shortly following publication of a summary of this Report and Order in the Federal Register, sufficiently in advance of February 28, 2010.

only subject to the conditions set forth in this Report and Order, including the early clearing mechanisms. Further, we expect all manufacturers to contact dealers, distributors, and anyone else who has purchased wireless microphones and other low power auxiliary stations, and inform them of our decisions in this Report and Order to help clear the 700 MHz Band. Manufacturers should also provide information on the decisions in this Report and Order to any users that have filed warranty registrations for 700 MHz Band equipment with the manufacturer. We also expect manufacturers to post this information on their websites and include it in all of their sales literature.

106. In addition, we urge all manufacturers to extend their rebate offers and trade-in programs for any 700 MHz Band low power auxiliary stations, including wireless microphones, and widely publicize these programs to ensure that all users of wireless microphones are fully informed. To the extent manufacturers do not offer a rebate or trade-in program for 700 MHz Band low power auxiliary stations, we strongly encourage them to create or re-establish such programs. In contacting dealers and distributors, we expect manufacturers to inform these entities that they should: (1) inform all customers who have purchased low power auxiliary stations, including wireless microphones, that are capable of operating in the 700 MHz Band of our decision to clear the 700 MHz Band of such devices; (2) post such information on their websites; (3) include this information in all other sales literature; and (4) provide information in sales literature, including on their websites, on the availability of any manufacturer rebate offerings and trade-in programs related to low power auxiliary stations operating in the 700 MHz Band; and that they must comply with the disclosure requirements that we are adopting in this Report and Order.

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

107. In this Further Notice, we address the use of wireless low power auxiliary stations, including wireless microphones that operate on the TV bands by entities that are not eligible for a Part 74 low power auxiliary station license. In light of the important functions that these types of devices provide to the public, we propose that we should revise our rules to permit the use of wireless microphones and other low power audio devices in the core TV bands on an unlicensed basis under Part 15 of the rules by entities that are not currently eligible for licensing under Part 74, Subpart H of the rules. We also propose to adopt technical rules for such operation under Part 15. In addition, we seek comment on whether to provide for some expansion of the eligibility under Part 74, Subpart H of the rules to create additional categories of licensed use of wireless microphones or other low power auxiliary stations. We also seek comment on the adoption in our rules marketing and labeling requirements, including possible requirements pertaining to Part 74 low power auxiliary stations that could help ensure that ineligible entities do not obtain such devices. Consistent with our broader efforts to manage spectrum as effectively and efficiently as possible, we also seek comment on possible long-term reform, based in part on technological innovation such as digital technology, that would enable wireless microphones to operate more efficiently and with improved immunity to harmful interference, thereby increasing the availability of spectrum for wireless microphone and other uses. Finally, we seek comment on whether there are any changes we could make to other rule parts, including Part 90, that would address the needs of wireless microphone users.

108. As discussed in the Report and Order, there are several reasons why this is an appropriate time for the Commission to examine, in a comprehensive fashion, the rules for wireless microphones in the TV bands. In addition to those discussed above, the Commission adopted rules in November 2008 in the *TV White Spaces Second Report and Order* to permit new types of devices to operate on an unlicensed basis in vacant "white spaces" spectrum in the TV bands. These "TV Band Devices" are regulated under Part 15 of the Commission's rules.[284] The rules require TV Band Devices to protect licensed operations in the TV bands, including wireless microphones and other Part 74 low power auxiliary stations. A

[284] *See* 47 C.F.R. §§ 15.701-15.717.

number of petitions for reconsideration of the *TV White Spaces Second Report and Order* raise issues related to the protections afforded wireless microphones in that order. Although the issues in these petitions for reconsideration and the proposals in this Further Notice are related, we do not address herein the specific issues raised in the petitions for reconsideration of the rules regarding wireless microphone operations and TV Band Devices. Rather, the proposals and other issues in this Further Notice are intended to balance the needs of various wireless microphone users, in particular, with other important uses of the spectrum, including new unlicensed devices that can be used for broadband and other applications in portions of the TV bands.

A. Operation in the TV Bands

1. Unlicensed Operation under Part 15

109. Background. As various parties have noted, and as discussed in the Report and Order, many entities have been operating Part 74 wireless microphones in the TV bands on an unauthorized basis. As discussed above, several commenters have proposed either that currently unauthorized wireless microphone users operate in the TV bands on a "co-equal" basis with unlicensed TV Band Devices or on an unlicensed basis under Part 15.[285]

110. Discussion. We seek comment on allowing wireless microphones to operate on an unlicensed basis in the TV bands under Part 15 of the rules generally, the technical proposals discussed herein, and the other specific proposals that commenters and other interested parties have made in the record with respect to permitting wireless microphones to operate under Part 15 of the Commission's rules.[286]

111. Many users may need only a single or a small number of wireless microphones operating simultaneously, and only one or two vacant TV channels may be required for such users. Even with TV Band Devices operating in the TV bands, the rules that the Commission adopted in the "white spaces" proceeding are designed to ensure that there will be one or more TV channels available for wireless microphones at most locations. Specifically, only fixed TV Band Devices may operate on channels below 21, and fixed TV Band Devices are not permitted to operate adjacent to occupied TV channels, whereas wireless microphones may do so. Thus, at any given location some TV channels cannot be used by TV Band Devices and should be available for wireless microphones. In addition, in the 13 metropolitan areas where the Private Land Mobile and Commercial Mobile Radio Services are permitted to operate on channels 14-20, TV Band Devices are not permitted to operate on the first vacant TV channel above and below channel 37, thus leaving them available for wireless microphones. We seek comment on these assumptions and whether allowing wireless microphones to operate on a non-licensed basis in the TV bands under Part 15 of the rules may meet the needs of the vast majority of wireless microphone users.

112. In addition, we propose technical rules for the operation of wireless microphones as unlicensed devices under Part 15 of the rules. We propose to adopt the term "Wireless Audio Devices" for such devices and to define them as intentional radiators used to transmit voice, music or other audio material over short distances. Under this proposal, transmissions would be allowed to use either analog or digital modulation techniques. To ensure that such devices are used only for their intended purpose of transmitting audio material, we propose to prohibit data transmissions except for short data strings such as recognition codes necessary to ensure the functionality of a system. We also propose to prohibit

[285] *See* PISC Petition at 32; PISC et al. Apr. 22 *Ex Parte* at 1; Verizon Wireless July 16 Ex Parte at 2 n.7 (citing Verizon Wireless June 8 Ex Parte at 3-5); Public Knowledge June 18 Ex Parte at 1.

[286] *See, e.g.*, Motorola Aug. 6 *Ex Parte*; Verizon Wireless July 16 *Ex Parte*; Verizon July 27 *Ex Parte*; Verizon Wireless June 8 *Ex Parte*; Public Knowledge June 18 *Ex Parte*.