

March 12, 2014

Via E-mail and U.S. Mail

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[rashmi.doshi@fcc.gov](mailto:rashmi.doshi@fcc.gov)

Mr. John Poutasse, Acting Chief  
Spectrum Enforcement Division  
Enforcement Bureau  
Federal Communications Commission  
445-12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Dr. Rashmi Doshi, Chief  
Laboratory Division  
Office of Engineering and Technology  
Federal Communications Commission  
7435 Oakland Mills Rd  
Columbia MD 21046-1609

Re: Violations of Part 18 Regulations; Lumatek LK-1000 RF Dual  
Voltage HPS-MH Dial A Watt Dimmable, 1000W-750W-600W Lighting  
Device (Electronic Ballast); Conducted Emission Limit, Labeling and  
Marketing Violations.

Dear Mr. Poutasse and Dr. Doshi:

This office represents ARRL, the national association for Amateur Radio, formally known as the American Radio Relay League, Incorporated. The purpose of this letter is to request on behalf of ARRL that the Commission investigate and commence an enforcement proceeding in order to halt immediately the marketing and retail sale of an RF lighting device in the United States known as the Lumatek LK-100 Electronic Ballast. This device is intended for agricultural/horticultural deployment and is known as a “grow light.” The device has been thoroughly tested by ARRL’s laboratory and has been found to grossly exceed the Conducted Emission limits set forth in Section 18.307(c) of the Commission’s Rules. As well, the device is also being marketed and sold in violation of, at least, Section 18.213 of the Commission’s Rules.

ARRL has received numerous complaints from amateur radio operators of significant noise in the Medium (MF) and High Frequency (HF) bands between 1.8 MHz and 30 MHz from “grow lights” and other RF lighting devices generally. In response to these complaints, among other things, ARRL purchased the Lumatek LK1000 grow light at retail from Sears (i.e. Sears Holdings Corporation) through its web site. ARRL tested the device in its laboratory. The results of the tests made by ARRL are in the attached Conducted Emissions Test Report (the “Report”). ***On information and belief, other similar products exhibit the same excessive conducted emissions as does the LK1000.***

The Lumatek grow light has been imported by Hydrofarm Horticultural Products of Petaluma, CA (see, [www.hydrofarm.com](http://www.hydrofarm.com)). In addition to Sears, the device is apparently available from Amazon and other retail sources including but not necessarily limited to those listed at page 1 of the Report.

As can be seen from the Report, ARRL tested the conducted emissions from this device according to the IEEE C63.4-2009 standard for Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment. At page 5, the Report concludes from the conducted emissions tests that the six highest emissions from the device in the HF band *vastly* exceed the Quasi-Peak limit specified in Section 18.307(c) of the Rules. For example, the Quasi-Peak limit in the bands between 3.0 and 30 MHz is 48 dB $\mu$ V. The Lumatek device has a Quasi-Peak Interference Voltage at 6.4 MHz of 106 dB $\mu$ V. At 21.2 MHz, the Quasi-Peak Interference Voltage is 64 dB $\mu$ V. Appendix C of the attached Report shows that in both phase-to-ground and neutral-to-ground operating conditions, when operated at any of the four power settings of the device (i.e. 600 watts, 750 watts, 1,000 watts and “Super Lumens”), the conducted emissions limits are exceeded, sometimes by extreme margins, throughout the *entire* HF frequency range.

The level of conducted emissions from this device is so high that, as a practical matter, one RF ballast operated in a residential environment would create preclusive interference to Amateur radio HF communications throughout entire neighborhoods.

As discussed in Appendix B of the Report, there are, in addition to the blatantly excessive conducted emissions from this device, substantive marketing violations associated with this device. The Report indicates that there is a circular sticker on the bottom of the device, bearing the FCC logo as called for by Section 18.209(b) of the Rules for devices subject to Declarations of Conformity. However, there is no FCC compliance information anywhere in the documentation for the device, or in or on the box, or on the device itself. Marketing of the device therefore does not comply with, at least, Section 18.213(d) of the Commission’s rules, which requires that RF lighting devices must provide an advisory statement, either on the packaging or with other user documentation, notifying the user that the operation of the device might cause interference to radio equipment operating between 0.45 MHz and 30 MHz. Variations of the language are permitted but presentation in a legible font or text style is required. No such notice is included with this device. Pursuant to Section 2.909 of the Commission’s rules, the party responsible for FCC compliance with rules governing RF devices is, in the case of devices that are subject to a grant of equipment authorization, the equipment

authorization grantee. Or, in the case of a device subject to a grant of a Declaration of Conformity, the responsible party is the importer. In this case, because there is no apparent grantee of equipment authorization, but there is a label consistent with a claim that the device is subject to a Declaration of Conformity, the Commission should look to the importer of the device as the responsible party.

ARRL respectfully requests that all such devices be removed from retail sale and marketing immediately. Those devices that have been sold to consumers, or which are available for retail sale should be tracked and recalled immediately. To the extent that there are successor or similar products imported by Hydrofarm Horticultural Products of Petaluma, CA, those devices should be immediately tested by the Commission for compliance with conducted emission limitations. Finally, it is requested that the importer of this device be subjected to a forfeiture proceeding commensurate with the Commission's enforcement policies.

Given the foregoing, on behalf of the more than 710,000 licensed radio amateurs in the United States, who have a significant interest in avoiding interference from these noncompliant devices, ARRL respectfully requests that your office take the appropriate action with respect to this device without delay.

Should any additional information be called for, please contact either the undersigned, General Counsel for ARRL, or Mr. Mike Gruber of the ARRL's staff, whose contact information is listed on the attached Report. Thank you very much for your consideration of this request.

Sincerely,

*Christopher D. Imlay*

Christopher D. Imlay  
General Counsel, ARRL

Attachment

Copies to:	Hydrofarm West 2249 S. McDowell Ext. Petaluma, CA 94954	Sunlight Supply, Inc. 5408 N.E. 88 <sup>th</sup> Street, Bldg. A Vancouver, WA 98665
	Sears Holdings Corporation 3333 Beverly Road Hoffman Estates, IL 60179	SLS California Livermore, CA (Via Fax only: 925-454-1535)