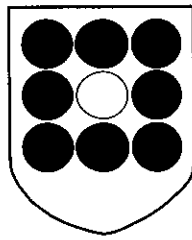


# CANADIAN CIVIL LIBERTIES ASSOCIATION

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Tuesday June 1, 2010

Chief of Police William Blair  
Toronto Police Service  
40 College Street  
Toronto, Ontario  
Canada  
M5G 2J3  
Fax: 416-808-8002

Dear Chief Blair:

I am writing to you to express the Canadian Civil Liberties Association's (CCLA) concerns regarding the Toronto Police Service's (TPS) purchase, and planned use of, Long Range Acoustic Devices (LRAD). We understand that the TPS has purchased four LRAD models – three hand-held units and one larger model that can be mounted on a vehicle. These devices are capable of emitting very loud sounds – 135 dB for the handheld units, and 143 dB for the mounted unit. According to the manufacturer, the LRAD “effectively disperses crowds and protects infrastructure” by enhancing communication and “[transmitting] powerful deterrent tones to influence behavior in hostile situations.”<sup>1</sup>

The CCLA has two concerns. First, we are concerned about the manner in which this weapon was purchased, as it appears to have circumvented the legislated approval and vetting process for the purchase and use of new weapons. Second, we are concerned about the safety implications of deploying an untested, unapproved weapon that can cause permanent physical damage.

The legislated approval process for new weapons exists to ensure that new weapons conform to and are used in accordance with technical standards established by the Solicitor General,<sup>2</sup> and that the Ministry of Community Safety and Correctional Services has had the opportunity to conduct field and technical testing.<sup>3</sup>

<sup>1</sup> LRAD Corporation, <http://www.lradx.com/site/content/view/293/110>.

<sup>2</sup> *Equipment and Use of Force*, R.R.O. 1990, Reg. 926, s. 14(1).

<sup>3</sup> Conversation with representative of the Policing Standards Section, Ministry of Community Safety and Correctional Services, May 27, 2010.



We understand that the LRAD, however, was purchased without any approval from the Ministry because the TPS defines the LRAD as a “communication tool” rather than a “weapon”. In our view, this is incorrect. It is undeniable that the LRAD has the ability to function as a communication tool. The device, however, is designed not only to communicate, but also to disperse crowds by “[transmitting] powerful deterrent tones”. The level of sound produced by these devices exceeds both the threshold for human discomfort (between 85 and 95 dB) and the normal human pain threshold (between 120 and 140 dB).<sup>4</sup> New technology that is designed to induce individual compliance through human discomfort and pain cannot be defined solely as a “communication tool”.

The CCLA is also extremely concerned about the health and safety impacts of this novel technology. Past experience with Conducted Electricity Weapons (CEWs, aka “Tasers”) has underscored the need for independent and objective scientific research into the effects of new weapons technologies *prior* to their use on the public. To our knowledge, however, there has been no independent Canadian scientific testing of the short- or long-term health impacts of the LRAD. The introduction of any new weapon into police arsenals requires a process of objective scientific research into the short-term and long-term physical effects of the weapon’s use, consultation with the public who are the potential targets of such weapons, and policy debates. Reliance on research by the manufacturer is insufficient.

There is reason to be concerned regarding the health impacts of the LRAD. The devices purchased by the TPS produce sounds at levels of up to 143 dB. Exposure to noise at 125 dB for even a fraction of a second exceeds Ontario’s allowable workplace health and safety guidelines,<sup>5</sup> and the World Health Organization’s guidelines state that “[t]o avoid acute mechanical damage to the inner ear, adults should never be exposed to more than 140 dB peak sound pressure” and children should not be exposed to more than 120 dB.<sup>6</sup> Canada Health guidelines also reflect these standards, stating that exposure to intense sounds such as a cap gun or firecracker “can cause immediate and severe hearing loss that may be permanent.”<sup>7</sup> At lower levels of sound exposure, there is a cumulative effect that can cause permanent damage; listening to noises of 110 dB for thirty seconds a day places an individual at significant risk of hearing loss.<sup>8</sup> Finally, LRAD’s manufacturer

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<sup>4</sup> National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, John R. Franks, Mark R. Stephenson, and Carol J. Merry Eds., *Preventing Occupational Hearing Loss – A Practical Guide* (1996) online: <http://www.cdc.gov/niosh/docs/96-110/pdfs/96-110.pdf> at 88;

<sup>5</sup> *Industrial Establishments*, R.R.O. 1990, Reg. 851 at s. 139.; calculations performed in accordance with O. Reg. 565/06, s. 2. with the assistance of the Occupational Health Clinics for Ontario Workers Inc. *Noise Exposure Calculator*, available online: [http://www.labour.gov.on.ca/english/hs/pubs/noise/gl\\_noise\\_3.php](http://www.labour.gov.on.ca/english/hs/pubs/noise/gl_noise_3.php).

<sup>6</sup> World Health Organization, *Guidelines for Community Noise*, 1999, online: [www.who.int/hq/1999/a68672.pdf](http://www.who.int/hq/1999/a68672.pdf) at pg. 45.

<sup>7</sup> Health Canada, “Hearing Loss and Leisure Noise”, January 2005, online: <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/viron/leisure-loisirs-eng.php>.

<sup>8</sup> *Íbid.*

has acknowledged that the device can cause permanent hearing damage if individuals are exposed for longer periods.<sup>9</sup>

The possible health risks are magnified due to the fact that the LRAD is a large-scale device, targeting a large population rather than specific individuals. Pain tolerance varies among the population, and certain groups – including children – are more vulnerable to hearing loss. Moreover, individuals within large crowds may be unable to move out of the LRAD’s range due to physical disability or the sheer volume of people in a given area. The indiscriminate nature of this device does not allow the police to accommodate and respond to individuals’ differing reactions, increasing the possibility that at-risk populations will be hurt.

Simply put, new weapons such as the LRAD should not be employed without prior independent assessment and study. Protocols regarding deployment and use should be developed with reference to independent science, not on the basis of manufacturer’s claims, and should incorporate public consultation and participation. Finally, comprehensive reporting, monitoring and oversight mechanisms must be established to account for how any approved weapons are actually used in the field.

The CCLA accordingly requests that the TPS refrain from using the LRAD until it has gone through a thorough and independent testing and approval process, including obtaining Ministry approval as required by law.

If the TPS intends to maintain that the LRAD is simply a ‘communication tool’, CCLA requests that, at a minimum, the TPS commit to disabling the ‘alert’ function – as was done by the Vancouver Police Service. Even if used as a “communication tool”, the LRAD should be subject to independent expert study to ensure that the maximum allowable volume is limited to a safe level, and that the weapon can continually operate according to – and not above – the manufacturer’s specified standards. Finally, the guidelines for use, including impacts on vulnerable populations, should be made public so that individuals can determine when they are at risk of negative health effects.

We look forward to your response, and would appreciate a reply by Friday June 4<sup>th</sup>, 2010.

Regards,



Nathalie Des Rosiers  
CCLA General Counsel



Abby Deshman  
Project Director, Fundamental Freedoms

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<sup>9</sup> Michael P. Regan, “Troops in Iraq get high-tech noisemaker to keep enemies away”, *USA Today*, March 3, 2004, online: [http://www.usatoday.com/tech/news/2004-03-03-hullabaloo\\_x.htm](http://www.usatoday.com/tech/news/2004-03-03-hullabaloo_x.htm).

Cc:

Alok Mukherjee, Chair, Toronto Police Services Board; fax: 416-808-8082

The Honourable Rick Bartolucci, Minister of Community Safety and Correctional Services; fax: 416-325-6067

William J.S. Elliott, Chief Commissioner RCMP; fax: 613-993-0260