

6 October 2022

[REDACTED]

Tēnā koe [REDACTED]

Request for information

Thank you for your request of 4 September 2022, in which you requested the following:

- 1) the number of Sabre Red Mk 9 that has been purchased, broken down by whether it is arrived or on order. If arrived, please indicate what district it is being stored in.*
- 2) the number of Sabre Red Mk 60 that has been purchased, broken down by whether it is arrived or on order. If arrived, please indicate what district it is being stored in.*
- 3) All written documentation, electronic communication, or meeting notes/ agendas, pertaining to or contributing to the decision to update the police instructions regarding the use of OC spray on March 1 2022. Please provide a summary of any meetings, conversations (whether face to face or via a telecommunications / AV platform) related to this decision.*
- 4) Any documentation reviewing, evaluating or setting out a business case for either the Sabre Mk 60 or Mk 9*

Your request has been considered in accordance with the Official Information Act 1982 (OIA), and I can now provide the following response.

As you may be aware, the Independent Police Conduct Authority (IPCA) has commenced an independent investigation and review (Review) of the policing of the occupation on and around Parliament grounds in Wellington during February and March 2022 (Protest).

Details of the scope of the Review are available on the IPCA's website¹ and you will note this scope includes Police planning and preparation of its response to the Protest. This includes staff selection, training, operational guidance, equipment, and technology provided to officers who policed the Protest.

Whilst this Review is underway, information relating to the issues under investigation and review is expected to be the subject of examination by the IPCA under its powers of investigation under the IPCA Act 1988. With this Review commenced, there is a strong public interest in allowing these matters to be considered in the round by the IPCA.

We consider that the following information requested tends to go to the heart of the matters that are under investigation and review by the IPCA:

- 3) All written documentation, electronic communication, or meeting notes/ agendas, pertaining to or contributing to the decision to update the police instructions regarding*

¹ <https://www.ipca.govt.nz/Site/publications-and-media/2022-media-releases/2022-mar-24-investigation-review-occupation-parliament.aspx>

the use of OC spray on March 1 2022. Please provide a summary of any meetings, conversations (whether face to face or via a telecommunications / AV platform) related to this decision.

Where such information is available, it is withheld in reliance upon section 9(2)(ba)(ii) of the OIA. It is in the public interest for the Review to be completed without earlier predetermination of the matters it is considering.

We consider the following information requested can be made available and is released as indicated following:

1) the number of Sabre Red Mk 9 that has been purchased, broken down by whether it is arrived or on order. If arrived, please indicate what district it is being stored in.

Police purchased and received 200 cannisters of Mk-9. These have been distributed across the country to all Police districts.

2) the number of Sabre Red Mk 60 that has been purchased, broken down by whether it is arrived or on order. If arrived, please indicate what district it is being stored in.

Police purchased and received 12 Mk-60 cylinders and 60 Mk-60 refill packs. These are stored in Wellington.

4) Any documentation reviewing, evaluating or setting out a business case for either the Sabre Mk 60 or Mk 9

Oleoresin Capsicum (OC) Spray is an approved tactical option for Police. A formal business case was not developed to purchase Mk-9 or Mk-60.

Police officers are trained and certified in the use of OC Spray as part of their annual certifications. Police officers also need to be first aid qualified to be able to deploy with tactical options.

Prior to deploying any tactical option, Police staff use the threat assessment methodology TENR (Threat, Exposure, Necessity, Response).

TENR is a decision-making process which is used to support a timely and accurate assessment for the safety of police and others. The Police response to any given situation must be considered, timely, proportionate, and appropriate.

You may also be interested in information Police has previously released under the OIA and proactively released on our website: <https://www.police.govt.nz/about-us/publication/parliament-protest-feb-mar-2022-official-information-act-public-releases>

In particular, the September 'Tactical options' release includes copies of both the previous and current OC spray Police Instructions, and the Police OC spray training manual.

The IPCA anticipates the Review will be completed and reported on by 31 March 2023. Police recognises the importance of transparency in these matters and looks forward to the release of the IPCA's report, at which time more detailed information regarding the Police response to the Protest is likely to be publicly available.

Please note that as part of its commitment to openness and transparency, Police proactively releases some information and documents that may be of interest to the public. An anonymised version of this response may be publicly released on the New Zealand Police website.

You have the right to ask the Ombudsman to review my decision if you are not satisfied with the response to your request. Information about how to make a complaint is available at:
www.ombudsman.parliament.nz.

Nāku noa, nā

David Greig
Superintendent
New Zealand Police

18 August 2022

IR-01-22-19465

Tēnā koe [REDACTED]

Request for information

Thank you for your request of 16 May 2022 to the Ministry of Business, Innovation and Employment (MBIE) and subsequently transferred to Police, in which you requested the following:

A clarification of the original request (IR-01-22-13084) was referred to Police by MBIE on 24/05/2022 - the amended question was missed and still needs a response - outstanding question relates to Q1 of original request:

1. Has the use of EMF been authorised for use in NZ?

***Clarification of question still to be responded to: "The form I'm after is the form used for crowd control. LRAD and AHAD, both high to low frequency EMF."*

Original request transferred to Police by DPMC (has been responded to on 31/05/2022).

I am seeking information relating to use of EMF in New Zealand:

1. Has the use of EMF been authorised for use in NZ?

2. Was EMF used during the protest in Wellington?

3. If used, for what duration was it used, and who authorised it?

Please accept my apologies for the miscommunication between Police and MBIE which delayed this response.

Your request has been considered in accordance with the Official Information Act 1982 (OIA), and I can now provide the following response.

As requested, we have interpreted your request for information as relating to Long-Range Acoustic Devices (LRADs). Police does not have any knowledge or use of AHAD, but an internet search indicates it stands for Acoustic Hailing and Disruption and this appears to be an alternative name for LRAD.

LRAD is a long-distance communication device that was purchased to support Police Negotiation Teams (PNTs). It is a hand portable device that allows staff to broadcast voice messages over background noise and over long distances (up to 600 metres). It broadcasts directional sound for targeted communication. Voice broadcasts using LRAD can penetrate buildings and vehicles to ensure any warnings or commands from Police are clearly heard and understood.

PNT can use LRAD in situations to negotiate with barricaded subjects or in crisis intervention. This allows subjects to have the time and space to understand their options and make their own decisions without the pressure of someone being near them. The device can also be used in situations where regular communication means are not accessible, such as search and rescue, civil defence emergencies, or disaster management (eg, tsunami, earthquake extractions).

Police purchased these devices to be used primarily in the above-described situations as an option to communicate with subjects, to avoid more serious interventions, such as breach and use of force, or where the subject cannot be easily located (such as in search and rescue situations).

Police National Headquarters

180 Molesworth Street. PO Box 3017, Wellington 6140, New Zealand
Telephone: 04 474 9499. www.police.govt.nz

LRAD also has an "alert/aversion tone" feature, which produces a short burst of intense sound and can be used in urgent situations as a warning.

As you may be aware, the Independent Police Conduct Authority (IPCA) has commenced an independent investigation and review (Review) of the policing of the occupation on and around Parliament grounds in Wellington during February and March 2022 (Protest).

Details of the scope of the Review are available on the IPCA's website¹ and you will note this scope includes Police planning and preparation of its response to the Protest equipment provided to officers who policed the Protest. It also includes Police command and control, decision-making processes, and operational execution (including tactics used and timeliness of tactics).

Whilst this Review is underway, information relating to the issues under investigation and review is expected to be the subject of examination by the IPCA under its powers of investigation under the IPCA Act 1988. With this Review commenced, there is a strong public interest in allowing these matters to be considered in the round by the IPCA.

We consider the following information can be made available.

1. Has the use of [LRADs] been authorised for use in NZ?

LRADs are not prohibited in New Zealand, and the purchase and use of LRADs by the PNTs is authorised by Police. Police have 17 LRAD units which have been incrementally purchased since 2016.

2. Was [LRADs] used during the protest in Wellington?

3. If used, for what duration was it used, and who authorised it?

Two LRAD units were deployed at the Protest on 2 March 2022 to first communicate that a street was closed and to ask people to keep back from the Police line. Subsequently, the alert tone was also used. One unit was deployed in Aitken Street, the other on the roof of Parliament building.

All deployment decisions of LRAD are made by PNT Commanders on a case-by-case basis. Only Police Negotiators who have been trained and qualified in the use of LRAD may use the device.

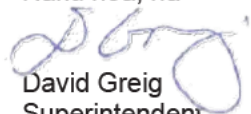
The IPCA anticipates the Review will be completed and reported on by 31 March 2023. Police recognises the importance of transparency in these matters and looks forward to the release of the IPCA's report, at which time more detailed information regarding the Police response to the Protest is likely to be publicly available.

Please note that as part of its commitment to openness and transparency, Police proactively releases some information and documents that may be of interest to the public. An anonymised version of this response may be publicly released on the New Zealand Police website.

You have the right to ask the Ombudsman to review my decision if you are not satisfied with the response to your request. Information about how to make a complaint is available at:

www.ombudsman.parliament.nz.

Nāku noa, nā



David Greig
Superintendent
New Zealand Police

¹ <https://www.ipca.govt.nz/Site/publications-and-media/2022-media-releases/2022-mar-24-investigation-review-occupation-parliament.aspx>

IR-01-22-20060

18 August 2022

Tēnā koe [REDACTED]

Request for information

Thank you for your request of 11 July 2022, in which you requested the following:

I am deeply concerned to hear the New Zealand Police used LRAD sound devices against peaceful demonstrators during the 'End the Mandates' protest at parliament earlier this year. I am also very concerned a weapon like this has been introduced to the New Zealand Police with no public input or awareness...

... For the purposes of crowd control, I am surprised our police would purchase one of these machines, let alone seventeen. I would like to know what is the rationale behind this policy and in what specific circumstances are these LRAD machines to be used? Are these machines going to be deployed at ALL peaceful protests?

Your request has been considered in accordance with the Official Information Act 1982 (OIA), and I can now provide the following response.

LRAD stands for long range acoustic device. It is a long-distance communication device that was purchased to support Police Negotiation Teams (PNT). It is a hand portable device that allows staff to broadcast voice messages over background noise and over long distances (up to 600 metres). It broadcasts directional sound for targeted communication. Voice broadcasts using LRAD can penetrate buildings and vehicles to ensure any warnings or commands from Police are clearly heard and understood.

PNT can use LRAD in situations to negotiate with barricaded subjects or in crisis intervention. This allows subjects to have the time and space to understand their options and make their own decisions without the pressure of someone being near them. The device can also be used in situations where regular communications means are not accessible, such as search and rescue, civil defence emergencies, or disaster management (eg, tsunami, earthquake extractions).

LRAD also has an "alert tone" feature, which produces a short burst of intense sound and can be used in urgent situations as a warning.

LRAD was used at the Wellington Protest on 2 March 2022 to first communicate that a street was closed and to ask people to keep back from the Police line. Subsequently, the alert tone was also used.

I cannot advise on the circumstances of possible future deployments as deployment decisions of LRAD are made by PNT Commanders on a case-by-case basis. Only Police Negotiators who have been trained and qualified in the use of LRAD may use the device.

As you may be aware, the Independent Police Conduct Authority (IPCA) has commenced an independent investigation and review (Review) of the policing of the occupation on and around Parliament grounds in Wellington during February and March 2022 (Protest).

Police National Headquarters

180 Molesworth Street. PO Box 3017, Wellington 6140, New Zealand
Telephone: 04 474 9499. www.police.govt.nz

Details of the scope of the Review are available on the IPCA's website¹ and you will note this scope includes Police planning and preparation of its response to the Protest equipment provided to officers who policed the Protest. It also includes Police command and control, decision-making processes, and operational execution (including tactics used and timeliness of tactics).

The IPCA anticipates the Review will be completed and reported on by 31 March 2023. Police recognises the importance of transparency in these matters and looks forward to the release of the IPCA's report, at which time more detailed information regarding the Police response to the Protest is likely to be publicly available.

Please note that as part of its commitment to openness and transparency, Police proactively releases some information and documents that may be of interest to the public. An anonymised version of this response may be publicly released on the New Zealand Police website.

You have the right to ask the Ombudsman to review my decision if you are not satisfied with the response to your request. Information about how to make a complaint is available at: www.ombudsman.parliament.nz.

Nāku noa, nā



David Greig
Superintendent
New Zealand Police

¹ <https://www.ipca.govt.nz/Site/publications-and-media/2022-media-releases/2022-mar-24-investigation-review-occupation-parliament.aspx>

18 August 2022

[REDACTED]

Tēnā koe [REDACTED]

Request for information

Thank you for your request of 12 July 2022, in which you requested the following:

It has been reported and verified that police use violent sound cannon on Parliament protesters.

I hereby request the details of the person who signed off and gave the police permission/consent to use the sound cannon on Parliament protesters.

Your request has been considered in accordance with the Official Information Act 1982 (OIA), and I can now provide the following response.

I have interpreted "violent sound cannon" to be a reference to the long range acoustic devices (LRAD) deployed by Police at the protest.

The LRAD is a long-distance communication device that was purchased to support Police Negotiation Teams (PNT). It is a hand portable device that allows staff to broadcast voice messages over background noise and over long distances (up to 600 metres). It broadcasts directional sound for targeted communication. Voice broadcasts using LRAD can penetrate buildings and vehicles to ensure any warnings or commands from Police are clearly heard and understood.

PNT can use LRAD in situations to negotiate with barricaded subjects or in crisis intervention. This allows subjects to have the time and space to understand their options and make their own decisions without the pressure of someone being near them. The device can also be used in situations where regular communications means are not accessible, such as search and rescue, civil defence emergencies, or disaster management (eg, tsunami, earthquake extractions).

LRAD also has an "alert tone" feature, which produces a short burst of intense sound and can be used in urgent situations as a warning.

LRAD was used at the Wellington Protest on 2 March 2022 to first communicate that a street was closed and to ask people to keep back from the Police line. Subsequently, the alert tone was also used.

All deployment decisions of LRAD are made by PNT Commanders on a case-by-case basis. Only Police Negotiators who have been trained and qualified in the use of LRAD may use the device.

As you may be aware, the Independent Police Conduct Authority (IPCA) has commenced an independent investigation and review (Review) of the policing of the occupation on and around Parliament grounds in Wellington during February and March 2022 (Protest).

Police National Headquarters

180 Molesworth Street. PO Box 3017, Wellington 6140, New Zealand
Telephone: 04 474 9499. www.police.govt.nz

Details of the scope of the Review are available on the IPCA's website¹ and you will note this scope includes Police planning and preparation of its response to the Protest equipment provided to officers who policed the Protest. It also includes Police command and control, decision-making processes, and operational execution (including tactics used and timeliness of tactics).

Whilst this Review is underway, information relating to the issues under investigation and review is expected to be the subject of examination by the IPCA under its powers of investigation under the IPCA Act 1988. With this Review commenced, there is a strong public interest in allowing these matters to be considered in the round by the IPCA.

We consider that the following information requested tends to go to the heart of the matters that are under investigation and review by the IPCA:

the details of the person who signed off and gave the police permission/consent to use the sound cannon on Parliament protestors

The details of any PNT commanders who approved the use of LRAD on 2 March are contained in reports prepared by Police following the events of that day, including the Tactical Options Reports. Where such information is available, it is withheld in reliance upon sections 9(2)(ba)(ii) and 9(2)(g)(ii) of the OIA. It is in the public interest for the Review to be completed without earlier predetermination of the matters it is considering.

The IPCA anticipates the Review will be completed and reported on by 31 March 2023. Police recognises the importance of transparency in these matters and looks forward to the release of the IPCA's report, at which time more detailed information regarding the Police response to the Protest is likely to be publicly available.

Please note that as part of its commitment to openness and transparency, Police proactively releases some information and documents that may be of interest to the public. An anonymised version of this response may be publicly released on the New Zealand Police website.

You have the right to ask the Ombudsman to review my decision if you are not satisfied with the response to your request. Information about how to make a complaint is available at: www.ombudsman.parliament.nz.

Nāku noa, nā



David Greig
Superintendent
New Zealand Police

¹ <https://www.ipca.govt.nz/Site/publications-and-media/2022-media-releases/2022-mar-24-investigation-review-occupation-parliament.aspx>

IR-01-22-19494

24 August 2022

[REDACTED]

Tēnā koe [REDACTED]

Request for information

Thank you for your Official Information Act 1982 (OIA) request dated 5 July 2022. The parts of your request are listed below, followed by my response to each.

Could I please have any policy documents, user guides, or police instruction documents for long-range acoustic devices (LRADS)?

Please find attached the following documents:

- Police Negotiation Team – Long Range Acoustic Device (LRAD) Standard Operating Procedures
- LRAD – Long Range Acoustic Device – Police Negotiation Team – LRAD training.

Some information in these documents has been withheld under the following sections of the OIA:

- section 6(c) – the making available of that information would be likely to prejudice the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial.
- section 9(2)(a) – to protect the privacy of natural persons, including that of deceased natural person.

Additionally, the manufacturer provides these user guides on their website:

<https://www.audio-technica.com/en-us/pro8hex>

https://portal.genasys.com/wp-content/uploads/2020/11/LRAD-100X_106457-01-R.E-Artwork-product-manual.pdf

Could I also please have a list of each time these devices have been used by police, how they were used and the purpose of their use, since they were first purchase.

Police National Headquarters

180 Molesworth Street. PO Box 3017, Wellington 6140, New Zealand.
Telephone: 04 474 9499. Fax: 04 498 7400. www.police.govt.nz

LRAD stands for long range acoustic device. It is a long-distance communication device that was purchased to support Police Negotiation Teams (PNT). It is a hand portable device that allows staff to broadcast voice messages over background noise and over long distances (up to 600 metres). It broadcasts directional sound for targeted communication. Voice broadcasts using LRAD can penetrate buildings and vehicles to ensure any warnings or commands from Police are clearly heard and understood.

PNT can use LRAD in situations to negotiate with barricaded subjects or in crisis intervention. This allows subjects to have the time and space to understand their options and make their own decisions without the pressure of someone being near them. The device can also be used in situations where regular communications means are not accessible, such as search and rescue, civil defence emergencies, or disaster management (e.g. tsunami, earthquake extractions).

Police purchased these devices so they can be used primarily in the above-described situations as an option to communicate with subjects, to avoid more serious interventions, such as breach and use of force, or where the subject cannot be easily located (such as in search and rescue situations).

LRAD also has an "alert/aversion tone" feature, which produces a short burst of intense sound and can be used in urgent situations as a warning. LRAD was used at the Wellington Protest on 2 March 2022 to first communicate that a street was closed and to ask people to keep back from the Police line. Subsequently, the alert tone was also used.

All deployment decisions of LRAD are made by PNT Commanders on a case-by-case basis. Only Police Negotiators who have been trained and qualified in the use of LRAD may use the device.

Provided in Table 1 is the number of PNT deployment reports that mentioned "LRAD" was mentioned in the description. Please note that these numbers are based on a text search for "LRAD" in the description of circumstances field in PNT deployment reports, which may not capture every instance in which an LRAD was deployed

Table 1. AOS/PNT deployment reports with "LRAD" in description of circumstances, by Year.

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | Total |
|-------|------|------|------|------|------|-------|
| Total | 2 | 5 | 12 | 28 | 6 | 53 |

As you may be aware, the Independent Police Conduct Authority (IPCA) has commenced an independent investigation and review (Review) of the policing of the occupation on and around Parliament grounds in Wellington during February and March 2022 (Protest).

Details of the scope of the Review are available on the IPCA's website¹ and you will note this scope includes Police planning and preparation of its response to the Protest,

¹ <https://www.ipca.govt.nz/Site/publications-and-media/2022-media-releases/2022-mar-24-investigation-review-occupation-parliament.aspx>

including equipment provided to officers who policed the Protest. It also includes Police command and control, decision-making processes, and operational execution (including tactics used and timeliness of tactics).

Whilst this Review is underway, information relating to the issues under investigation and review is expected to be the subject of examination by the IPCA under its powers of investigation under the IPCA Act 1988. With this Review commenced, there is a strong public interest in allowing these matters to be considered in the round by the IPCA.

The IPCA anticipates the Review will be completed and reported on by 31 March 2023. Police recognises the importance of transparency in these matters and looks forward to the release of the IPCA's report, at which time more detailed information regarding the Police response to the Protest is likely to be publicly available.

Please note that as part of its commitment to openness and transparency, Police proactively releases some information and documents that may be of interest to the public. An anonymised version of this response may be publicly released on the New Zealand Police website.

You have the right to ask the Ombudsman to review my decision if you are not satisfied with the response to your request. Information about how to make a complaint is available at: www.ombudsman.parliament.nz.

Nāku noa, nā



Dave Greig
Superintendent
New Zealand Police

POLICE NEGOTIATION TEAM

LONG RANGE ACOUSTIC DEVICE (LRAD)

STANDARD OPERATING PROCEDURES



POLICE NEGOTIATION TEAM

STANDARD OPERATING PROCEDURES

LRAD 100X

| | |
|---------------------------------|---|
| SOP Title | Police Negotiation Team (PNT) Standard Operating Procedures LRAD 100X Equipment |
| Date of Issue | 27 April 2021 |
| Date of Operation | 27 April 2021 |
| Review Date | National distribution – 27 April 2021 |
| Review Responsibility | PNT National Capability Advisor |
| Replaces | Previous LRAD material on District basis |
| Associated General Order | None |
| Inquiries to | PNT National Capability Advisor |

CONTENTS

- 1 Policy Statement**
- 2 Procedures and Limitations**
- 3 Deployment**
- 4 Training**
- 5 References**
- 6 Document History**

1 POLICY STATEMENT

The Long Range Acoustic Device 100X (LRAD) is a long-range communication device that can easily be heard over the background noise of vehicles, vessels, sirens and boisterous crowds to ensure the messages and commands are heard and clearly understood.

The device provides directional communication and also has a warning (aversion) tone that provides a non-lethal deterrent, shapes behaviour and supports intent.

The device may be used in all weather conditions.

Police Negotiation Team (PNT) members have access to:

- » The LRAD - a portable, self-contained, hand-held or self-standing device, 20-30 decibels (dB) louder than most megaphones and is designed for use over distances up to 1000 metres to ensure clear and loud voice communication for distinct understanding. The device is battery operated.
- » The wireless and cellular telephone capability operating in conjunction with the above.
- » The magnetic vehicle mount to support the operation of the above.

Scope

This policy relates to all PNT members using the LRAD.

2 PROCEDURES and LIMITATIONS

PNT members who have undertaken the national PNT qualification course, and who are certified in the use of the LRAD, may use the device.

The PNT member responsible for using the LRAD will ensure that, upon return, the equipment is dismantled and stored correctly.

The LRAD should be inspected regularly and, if damage or defect is located, the relevant PNT Commander, PNT equipment portfolio holder or LRAD lead will undertake remedial action.

Ear Protection:

- » Hearing protection should be utilised in conjunction with deployment of the LRAD, particularly for those deployed forward of it or operating in the vicinity.

Carriage:

- » The LRAD – is portable and may be carried by one person.

Wireless and Cellular Telephone Capability:

- » The LRAD has both a wireless and cellular telephone capability which can be utilised in conjunction with the main piece of equipment.

Magnetic Vehicle Mount:

- » The LRAD comes with a magnetic vehicle mount which can be utilised as appropriate.

3 DEPLOYMENT

The deployment of the LRAD should be considered in any incident where there is a need to amplify over distances up to 1000 metres and/or to ensure communication is heard, such as those incidents where a bull-horn is normally used.

When deploying the LRAD at an incident, the following guidelines should be followed:

- » The device must be stable when set-up. The supplied tripod should be used when applicable, equally the equipment is capable to being deployed hand held.
- » The device should not be operated without ear protection.
- » The capabilities and limitations of the device, including volume, direction and aversion tone, should be outlined to the Incident Controller, or other command and control structure pursuant to the coordinated incident management system (CIMS).
- » Authority of the PNT Commander, or duty PNT Commander, in conjunction with the Incident Controller, or other command and control structure pursuant to the coordinated incident management system (CIMS), should be obtained before deploying forward with the LRAD.
- » When PNT is deployed forward with the LRAD, a TENR assessment should be undertaken and appropriate measures taken.

The LRAD must be dismantled and stored correctly ensuring that batteries are charged as required. Care should be taken not to overcharge batteries (leave on charge for more than 24 hours).

The aversion tone should not be deployed without authorisation from the PNT Commander (or duty PNT Commander) in conjunction with the Incident Controller, or other command and control structure pursuant to the coordinated incident management system (CIMS).

The operational use of the LRAD aversion tone must be reported to the relevant PNT Commander as soon as practicable. This is to allow the "no surprises" policy to be complied with should the use of the aversion tone be highlighted in any forum.

Volume control should be carefully considered before using the LRAD.

The LRAD should not be used when anyone is within 10 metres of the front of the device unless it is believed that person poses a threat of bodily harm to any person and the incident cannot be immediately resolved without a lower use of force.

An assessment of staff and public welfare should be undertaken in relation to all those working in front of the LRAD. Factors to consider are:

- » Distance from the LRAD.

- » Volume control.
- » Necessity of using the LRAD.

4 TRAINING

Initial certification must be done in conjunction with the PNT National Capability Advisor and their recommendation of a suitability trained and skilled LRAD operator.

All PNT members must be qualified members of PNT and be certified as competent in the use of the LRAD prior to using it.

All PNT members must be certified biennially.

Re-certification can be undertaken by the District PNT upon completion of the original training.

The PNT validation process will include the knowledge and use of the LRAD.

5 REFERENCES

Police Negotiation Team National Operating Guidelines.
LRAD operating manual.
LRAD deployment and use guide.

6 DOCUMENT HISTORY

| Date | Action |
|---------------|---|
| 27 April 2021 | Entire Document review due to national release. |
| | |
| | |

| EQUIPMENT – LRAD 100X SET-UP COMPETENCY CHECKLIST | | | | | | |
|--|--|-----------|-----------|-----------------------|----------|-----------|
| NAME | | DATE | | PRACTICE / ASSESSMENT | | |
| Initial Certification | | Yes / No | | Recertification | | |
| | | | | Yes / No | | |
| Performance Criteria | | | | | ✓ | |
| Demonstrated preparation of LRAD 100X <i>Includes connecting to power (mains and battery), attaching cable, MP3 player</i> | | | | | | |
| Demonstrated preparation of hearing protection <i>Includes safety, use of headphones and earplugs</i> | | | | | | |
| Demonstrated preparation of microphone <i>Includes connecting to unit, correct volume control</i> | | | | | | |
| Demonstrated use of LRAD 100X <i>Includes use of microphone, MP3 player, aversion tone</i> | | | | | | |
| Demonstrated securing of kit <i>Includes packing, security and care, wiping down of microphone</i> | | | | | | |
| Demonstrated use of wireless capability <i>Includes wireless capability and associated safety aspects</i> | | | | | | |
| Demonstrated use of cellular telephone capability <i>Includes cellular telephone capability and associated safety aspects</i> | | | | | | |
| Demonstrated use of aversion tone and impact <i>Includes knowledge of safety procedures, seeking authorisation for use</i> | | | | | | |
| Demonstrated understanding of use of LRAD magnetic mount <i>Includes set up and take down and use</i> | | | | | | |
| Demonstrated wider safety aspects of utilising the LRAD <i>Includes operating in a PNT alone capacity and joint deployments with other specialist squad eg SAR and AOS</i> | | | | | | |
| Demonstrated use in a negotiation <i>To be undertaken in a scenario with negotiation tactics and techniques utilised including contingency planning</i> | | | | | | |
| COMMENTS | | | | | | |
| | | | | | | |
| LRAD SET UP COMPETENCY | | NA | NC | C- | C | C+ |

Name of Assessor

Signed

Date

Guide

- NA Not assessed
 NC Did not demonstrate mandatory factors. NOT considered competent
 C- Demonstrated mandatory factors in acceptable manner but could improve
 C Demonstrated mandatory and other factors in acceptable manner
 C+ Demonstrated mandatory and other factors well



HAZARD RISK MANAGEMENT TOOL

Occupational Health Welfare and Safety and Injury Management, Hazard management

| | | | | | | | | |
|--|---|---|-----------------------------------|--|-------------------------|---------------------------|------------------------------|--|
| WORK GROUP: | | Police Negotiation Team | | DATE: | | Assessment Number: | | |
| STATION: | | | | | | | | |
| Plant | New | Name / Description / Item / Tasks / location of plant etc: | | The Long Range Acoustic Device 100X (LRAD) used as an amplifier and/or aversion over long distances. Used by PNT to make contact, be heard, issue instructions and/or use aversion; stored in vehicle or PNT squad room. Also comes with wireless and cellular telephone and vehicle mount capability. | | | | |
| Substance | Modified | | | | | | | |
| Manual Handling | Existing | | | | | | | |
| OTHER (task/job) | Review | | | | | | | |
| ASSESSMENT TEAM | | | | | | | | |
| Rank / Classification | | Name | | ID | Signature | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Risk Assessment | | | | | Action Plan | | | |
| Identify process steps and associated hazards | List hazard current control measures | Risk Ranking (use Table 3 below) | Risk Accepted Yes or No | Recommended hazard control measures (IF risk ranking is NOT accepted) | Who will action? | By when? (Date) | Complete Yes or No | Mitigated risk ranking (use Table 3 below) |
| Carrying set-up and dismantling of LRAD and associate accessories – manual handling injury | ADMINISTRATIVE: Current manual handling measures Training | LOW | Yes | | | | | |
| Deployment of LRAD and associated accessories – manual handling injury, tripping | ADMINISTRATIVE: Current manual handling measures Cable positioned safely Training | LOW | Yes | | | | | |
| Deployment of LRAD and associated accessories – deploying forward | PPE: Ballistic equipment to be utilised Consider AOS operator being present as appropriate ADMINISTRATIVE: | SIG | YES | | | | | |



HAZARD RISK MANAGEMENT TOOL

Occupational Health Welfare and Safety and Injury Management, Hazard management

| | | | | | | | | |
|--|---|---|-----|-----------------------------|--|-----------------------|--|-------------|
| | Not to deploy forward without the authority of the PNT Commander or duty PNT Commander, Incident Controller or other CIMS command and control structure Undertake TENR. | | | | | | | |
| Use of LRAD and associated accessories acoustic – hearing damage | PPE: Ear protection to be worn in applicable circumstances Consideration to be given to community impact assessment factors ADMINISTRATIVE: SOP - Not to stand within 10 metres of front of device when being used Aversion tone only to be used in short bursts (1-5) seconds with break in between Training | LOW | Yes | | | | | |
| Use of distancing cable (50m) – tripping | ADMINISTRATIVE: SOP - Cable positioned safely Use of cable protectors as required (eg over roads, driveways) SOP – Training | LOW | Yes | | | | | |
| Hygiene - multiple users using microphone contacting mouth | PPE: Alcohol wipes to be supplied to wipe down rubber mouth piece on microphone before/after use. | LOW | Yes | | | | | |
| | | The <u>highest rated risk</u> must be recorded as the overall rating | | | | OVERALL RATING | | SIGNIFICANT |
| Recommendations Authorised | | Recommendations Not Authorised | | Manager's signature: | | | | |
| Date to be reviewed: / / | | Note: Ensure if plant or substance that the Register is updated | | | | | | |
| COMMENTS (Insert photo if appropriate eg plant) | | | | | | | | |



HAZARD RISK MANAGEMENT TOOL

Occupational Health Welfare and Safety and Injury Management, Hazard management

| LIKELIHOOD: Table 1 | | | | | | CONSEQUENCE OR IMPACT: Table2 | |
|---|---|-------------|-------------|-------------|--------------|-------------------------------|---|
| Descriptor | Description | | | | | Descriptor | Example detail description |
| Almost Certain | The event is expected to occur in most circumstances-99% chance | | | | | Insignificant | No injuries or first aid only |
| Likely | The event will probably occur in most circumstances-50% chance | | | | | Minor | Hospitalised, medical treatment or first aid but no permanent disability, lost time less than a day |
| Possible | The event should occur at some time-years to decades-20% chance | | | | | Moderate | Hospitalised, medical treatment required, but no permanent disability, lost time injuries less than 5 days |
| Unlikely | The event could occur at some time-years to decades-1+% chance | | | | | Major | Actual or potential for moderate permanent disability, lost time injuries less than 10 days |
| Rare | The event may occur only in exceptional circumstances-100 years <1% chance | | | | | Catastrophic | Actual or potential for fatalities, or severe irreversible disability (greater than 30%) |
| RISK ANALYSIS MATRIX - LEVEL OF RISK: Table 3 | | | | | | | |
| Likelihood | Consequence | | | | | LEGEND | |
| | Insignificant | Minor | Moderate | Major | Catastrophic | | |
| Almost certain | Moderate | Significant | Significant | High | High | High = | Deal with immediately. Manager to monitor and manage. |
| Likely | Moderate | Moderate | Significant | Significant | High | Significant = | Interim action w/in 24 hours. Manager will monitor and manage. |
| Possible | Low | Moderate | Moderate | Significant | Significant | Moderate = | Monitored by Section/Unit manager. Interim measures in place within a month. |
| Unlikely | Low | Low | Moderate | Moderate | Significant | Low = | Monitored by a supervisor, Section/Unit manager. May take months to resolve. Some low risks may be acceptable but should be monitored to ensure the rating does not change. |
| Rare | Low | Low | Low | Moderate | Significant | | |
| HIERARCHY OF CONTROLS | | | | | | | |
| 1. Elimination | Are the tasks or process necessary? If YES go to step 2 | | | | | | |
| 2. Substitution | Is it possible to replace the hazardous plant, equipment, or work process with a less hazardous means or process? If NO go to step 3 | | | | | | |
| 3. Engineering | Is it possible to reduce the risk by isolation or physical controls: i.e. distance or enclosure, redesign the tasks, guarding, maintenance etc.? If NO go to step 4 | | | | | | |
| 4. Administration | Is it possible to reduce the risk with administrative controls: i.e. using a standard operating procedure, providing supervision, job rotation, signage etc? If NO go to step 5 | | | | | | |
| 5. Personal Protective Equipment (PPE) | Can the risk be reduced by use of protective clothing: i.e. gloves, glasses, boots, respirator etc? | | | | | | |

Revised: May 2021

LRAD – Long Range Acoustic Device

Police Negotiation Team – LRAD training



OVERVIEW

- Introduction
- Application
- Deployment
- Equipment
- Policy



INTRODUCTION

LRAD 100X



BACKGROUND

- Long range communication system.
- Designed to safely broadcast in a wide variety of situations.
- Ability to safely communicate beyond standoff distances
- Safer alternative to kinetic force measures.

KEY FEATURES

- Portable – can be mounted on a tripod or vehicle.
- 20-30 decibels louder than typical loudhailers or vehicle P.A. systems.
- Live or recorded broadcasting.
- Highly intelligible communication capability up to 600 meters.
- Focused, directional sound pattern for targeted communication.
- Voice broadcasts penetrate buildings & vehicles.
- Optional aversion tone – provides a non-lethal deterrent, capacity to escalate Police response to gain attention or change the subject's behaviour.

LRAD 100X

The lightest, most intelligible voice communication system available. Hand-portable and easily mounted on tripods and vehicles, the LRAD 100X broadcasts voice messages over background noise with exceptional clarity out to 600 meters.

Maximum range 600m in ideal conditions. Operational range up to 250m over 88dB of background noise. Range is based on continuous output.

In addition to featuring best in class broadcast voice intelligibility, the LRAD 100X is 20 – 30 decibels louder than typical bullhorns and vehicle-based P.A. systems. Live or recorded broadcasts from the portable LRAD 100X are clearly heard and understood above background noise. Optimized driver and waveguide technology coupled with power efficiency ensure several hours of clear, continuous communication. The LRAD alert tone safely alerts attention to the voice messages that follow in every incident scenario.

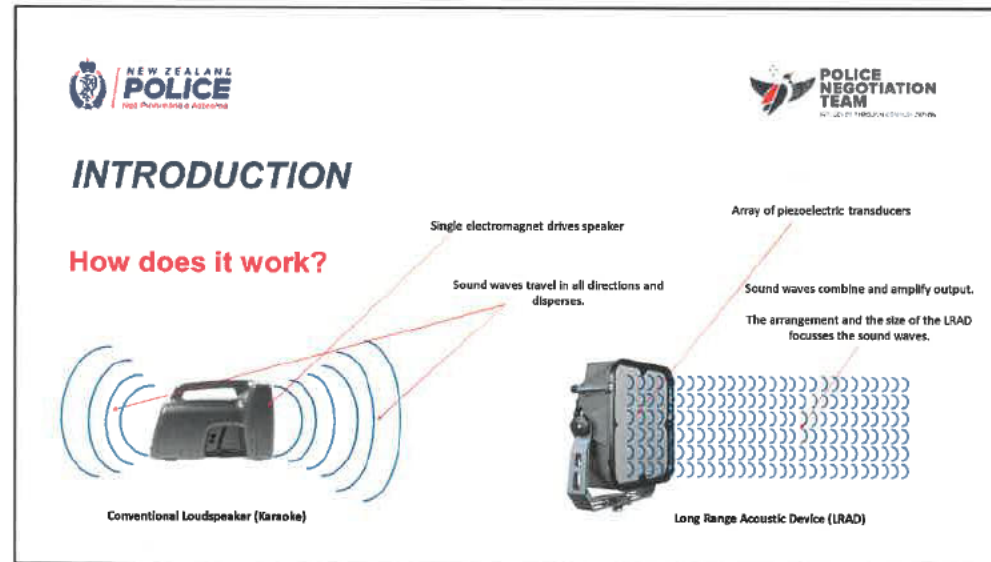
FEATURES

- 8-hour rechargeable battery (2hrs of continuous use at maximum volume)

- Simple user interface
- Water resistant

DIRECTIONALITY, POWER EFFICIENCY & RANGE

- Highly intelligible communication out to 600 meters
- Focused, directional sound pattern for targeted communication
- Voice broadcasts penetrate buildings & vehicles to ensure warnings, commands, and notifications are clearly heard and understood



Sound waves can pass through one another without much distortion or change. But in the right conditions, sound waves can change each other dramatically. For example, identical sound waves that are **out of phase** (their compressions and rarefactions are reversed) can cancel one another out. On the other hand, identical waves that are **in phase** combine their compressions and rarefactions, doubling their amplitude.

As sound waves travel, they spread out in all directions in a curved **wave front**. The farther they travel from the source, the more they spread and the quieter the sound becomes. But high-frequency waves don't spread as much as low-frequency waves. Also, waves with long wavelengths generally travel farther than ones with short wavelengths.

Instead of using one big, moving device to make sound, the LRAD uses lots of little ones. A speaker usually uses one rapidly moving diaphragm to make sound. The LRAD uses has an array of **piezoelectric transducers**. A transducer is simply a device that changes one kind of energy into another kind of energy. In this case, it changes electrical impulses into sound.

All of these transducers are attached to a mounting surface. They're staggered to allow more of them to fit into a

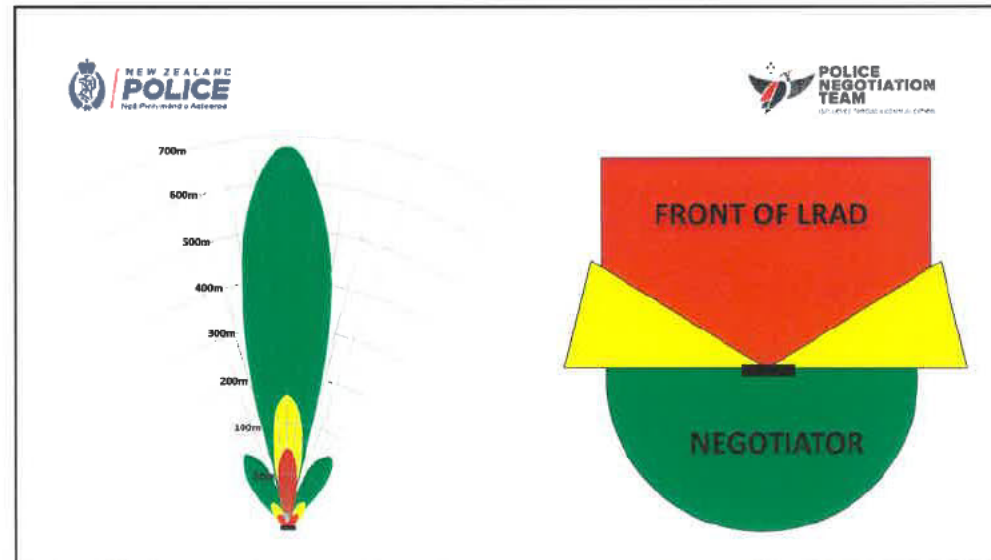
smaller space. This helps the LRAD create very loud sounds -- identical waves emerge from the transducers, and their amplitudes combine to create louder sounds.

So that's how the LRAD creates lots of volume. But the sound coming from the LRAD is also relatively **directional**. It doesn't disperse as much as sounds from typical speakers. People behind or next to the device still hear the sound, but not as loud. Even outside the beam, the sound can still be loud, so operators and nearby personnel often wear ear protection.

The LRAD uses the phase of the sound waves, the size of the device and the properties of air to create more directional sound: The outer transducers are not completely in phase with the inner transducers. The sound waves interact with one another, cancelling out some of the outermost waves and making the sound less audible outside of the "beam."

The device's diameter is larger than most of the wavelengths it produces. This allows the device to create a wave front that's more flat than rounded, keeping the sound from dispersing.

Air interferes with sound waves as they pass through it. As the LRAD's sound waves interact with the air, they create additional frequencies within the wave. Such waves are referred to as **parametrically generated**, and many speakers try to prevent them. The LRAD uses them to create a greater range of pitches and to add volume.



By design, the LRAD® transmits a focused, narrow beam ($\pm 15^\circ$) of sound directly ahead of the device with up to 40 dB reduction in sound pressure levels to the sides and behind the device, as can be seen in the diagrams. International health and safety standards allow exposure to 115 dB of noise for up to 15 minutes per day.

The design of the LRAD® ensures that the operator standing behind the device is exposed to no more than 105 dB during normal operation (i.e. about ten times lower than the maximum permitted). However, operators should wear hearing protection (such as foam ear-plugs) so that they experience no discomfort due to the potential for reflected sound to increase the sound pressure level behind the device or in the event the system is operated for extended periods.

LRAD Promotional

**LRAD: GAME CHANGER
FOR LAW ENFORCEMENT
COMMUNICATIONS**



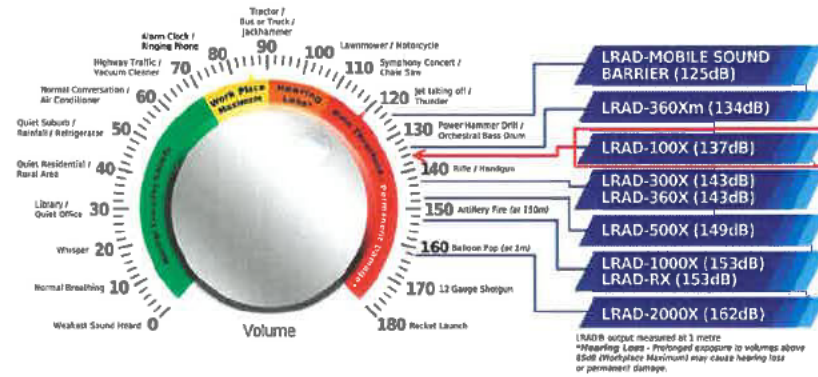
LRAD demo – Focused sound





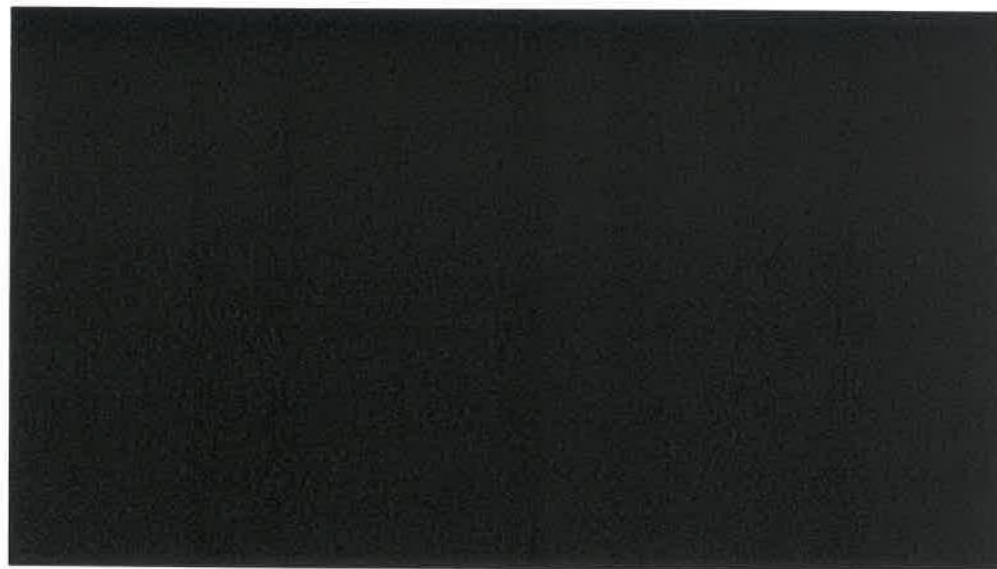
LRAD demo – Helicopter use







LRAD use - G20 protests



LRAD APPLICATION

Uses

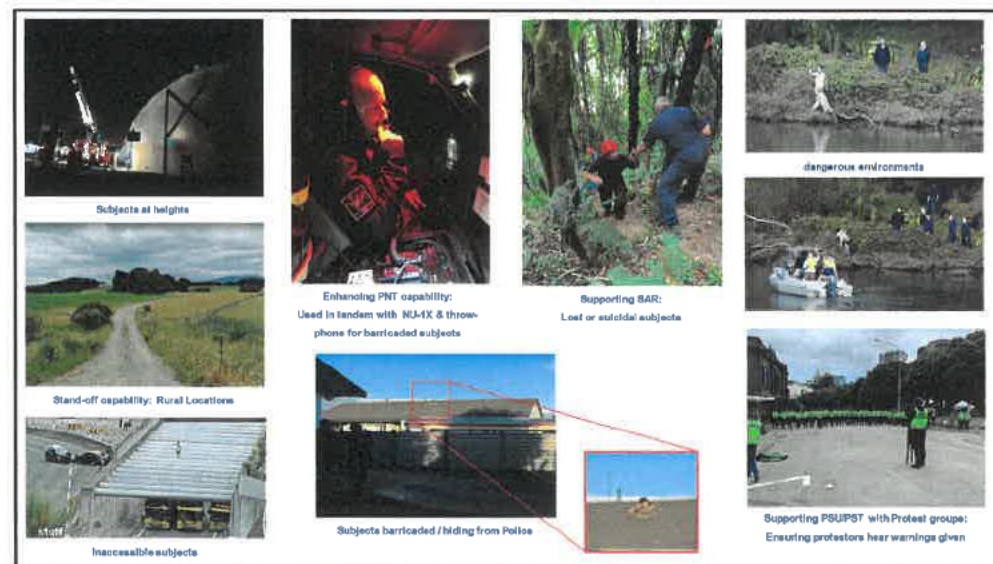


LRAD available for deployment by PNT in support of:

- District operations where AOS/STG are utilised.
- Crisis intervention.
- Search and rescue.
- Public Order Policing – District operations where PSU is utilised.
- Cell extractions.
- High risk warrants.
- Civil Defence emergencies & disaster management (COVID, Tsunami etc).
- Useful in helping end hostage situations and barricaded subject situations.
- Allows clear communication from Police to subject.

Advantages Include:

- Greater stand-off distance compared to Karaoke.
- Negotiator and LRAD can be in cover – sound penetrates buildings & vehicles.
- Can be operated from platforms such as vehicles and helicopters.
- Broadcasts can be clearly heard over surrounding noise.



PNT supporting PSU units with protesters at the Defence Forum in Palmerston North.

Not used with aversion tone, but used to be able to warn trespassing protesters.

Court cases have previously struggled to gain a conviction due to evidence as to whether the defendant heard the warning to leave, prior to arrest.

Evidence can be given by qualified PNT member trained in the LRAD regarding it's use and the fact that the sound will penetrate objects meaning the protester can't not hear it.

Rural Negotiation – s.9(2)(a) OIA

Three subjects inside the lounge of a farm house in a rural location.

Around midnight AOS surround the house and the LRAD is set up at the start of the driveway, approximately 350m away from the house. A stand of thick trees is between the LRAD and property.

LRAD commences – the occupants can hear the dialogue and can't work out where it is coming from. Once they hear that Armed Police are outside, one person comes to the door to look and is challenged.

When spoken to afterwards, they state that they could hear the PNT member clearly and believed that the voice was coming from within the lounge.

They thought that Police had a secret tech ability that allowed remote access the speaker on the cell phone (which had been on the coffee table at the time) – They even removed the battery to ‘stop the voice coming from the phone’.

Shots fired within residential address s.9(2)(a) OIA

Family Harm incident – male has argument with his partner in the lounge of their two-storey s.9(2) OIA house. He goes upstairs, takes a .22 and fires two rounds through the floor into the lounge. Female leaves.

House is located s.9(2)(a) OIA

LRAD is setup for wireless operation, setup on tripod and placed on back seat of AOS vehicle. PNT member in separate vehicle at rear of stack.

Vehicles leave SFP to deploy hard cordons on target house. PNT member stops short at intersection, 250m away.

AOS drive to address and place LRAD on driveway. Appeal commences.

Initially no response from subject so aversion tone used. Male comes to back door and is challenged before being taken into custody.

Wireless connection worked flawlessly at that distance (had previously been tested during training at 400m).


s.9(2)(a) OIA – LRAD on standby (but not deployed)

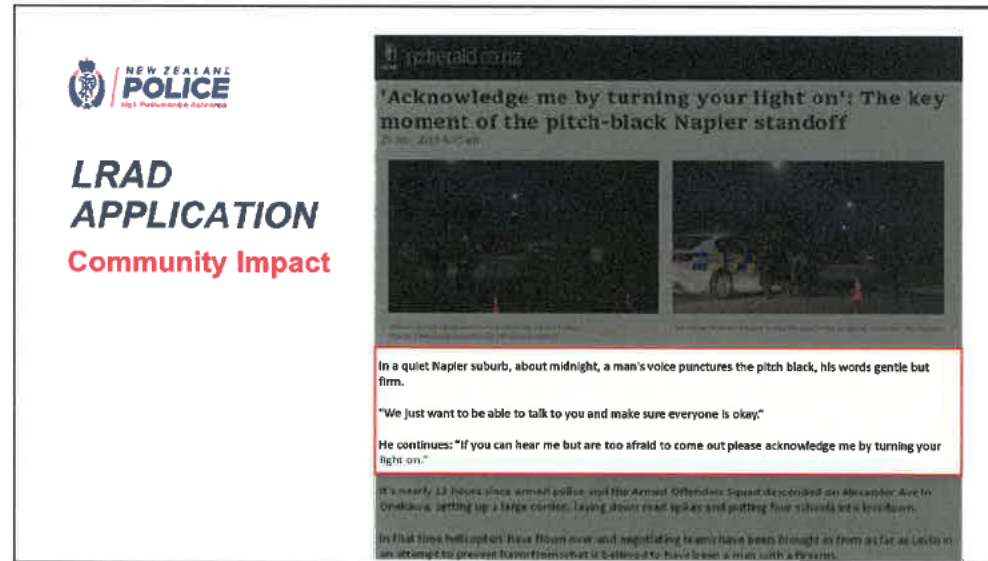
Male on top of the s.9(2)(a) OIA in Wellington. LRAD was brought down from Palmerston North, however was not utilised do to the excellent work done by the primary negotiator.

s.6(c) OIA

[REDACTED]

s.6(c) OIA





24th June 2019 – Male has fired a shotgun in public before going to his house. Partner and baby are also inside. Area cordoned off around 3pm. Manawatu PNT contacted to assist at 5pm.

LRAD deployed forward (by PNT) to be used in s.6(c) OIA and throw-phone.

LRAD set up in property opposite to the target address, throw-phone thrown onto front doorstep.

LRAD commences and used to enable male to retrieve throw-phone, before convincing male to accept the phone call from PNT.

LRAD was able to project empathy and a calm voice to help build trust and rapport.

Members of the public also reassured by the tone and delivery used with the LRAD.

LRAD APPLICATION

Uses



First option or alternative to deploying kinetic measures including:

- Tear gas projectiles.
- Sponge/rubber projectiles.
- Flash bang grenades.

Advantages as alternative to above:

- No damage to dwellings buildings.
- Lower community impact.



NOTE

- The LRAD is a one way communication tool.
- It needs to be used as part of an overall communication strategy

LRAD OPERATION

Deployment



Setup of LRAD:

- Consider whether used in conjunction with tripod or magnetic mount.
- Consider whether used wired or wireless. Check transmitter battery capacity.
- Ensure battery is charged and connected. Backup battery available.
- Connect wireless receiver to the LRAD or
- Connect 20m lead, hand-held control module and 'record-on-the-fly' microphone.
- Connect LRAD to mounting system.
- Check and recheck all connections and test LRAD prior to deployment.

Brief Zero Alpha Prior to Deployment:

- Where within the AO the LRAD and PNT is being deployed.
- Cover and AOS support if needed.
- Overall goals and desired outcome of LRAD deployment. Expectations of LRAD.
- Briefing for AOS operators if deploying LRAD forward for PNT.

LRAD OPERATION

Deployment



Negotiators deploying forward should ideally have the following kit:

- Ear protection (dynamic headsets or ear plugs at very least).
- SRBA / BAS and full appointments.
- Ballistic protection (HAP or similar).
- Means of Communication with the duty PNT Commander (encrypted radio, phone).
- Consideration given to deploying with firearms (depending on staffing & resources).

When deploying consider:

- Background of target address.
- Community Impact, evacuating public.
- Option to landslide back to SFP if needed.
- Consideration for staff on the ground.

Exfill of LRAD:

- Generally left in place until incident is resolved (unless there is a need to redeploy).

LRAD OPERATION

Equipment



HIGH STRENGTH
MAGNETIC MOUNT SYSTEM



WIRELESS KIT
FOR REMOTE
OPERATION



HANDHELD CONTROL
MODULE (MP3 PLAYER)
WITH
RECORD-ON-THE-FLY
MICROPHONE

LRAD OPERATION

Equipment





LRAD OPERATION Policy



POLICE NEGOTIATION TEAM

STANDARD OPERATING PROCEDURES

LRAD 100X



| | |
|--------------------------|---|
| SCOP Title | Police Negotiation Team (PNT) Standard Operating Procedures LRAD 100X Equipment |
| Date of Issue | 27 April 2021 |
| Date of Operation | 27 April 2021 |
| Review Date | Next annual distribution – 27 April 2023 |
| Review Responsibility | PNT National Capability Advisor |
| Replaces | Previous LRAD material on District basis |
| Associated General Order | None |
| Approved by | PNT National Capability Advisor |

Questions?