



UNDERGROUND · CS-435

THE LINE THAT LISTENS SO NO ONE HAS TO WALK THE WIRE

A chain of buried Mole nodes on a fibre trunk — detect, localize, cue. Nothing radiated, nothing to jam.

DETECT · LOCALIZE · CUE · HUMAN-CONFIRMED INTERPOSE

PATENT PENDING

EXPORT-CONTROLLED — INTERNATIONAL TRANSFER SUBJECT TO CANADIAN GOVERNMENT PERMITS

DETECTS & CUES ONLY — NO STRIKE AUTHORITY ANYWHERE IN THE LOOP

0 RADIO OR GPS LINKS ANYWHERE IN THE SYSTEM — FIBRE, NODE- TO-NODE, ALWAYS	24/7 CONTINUOUS PASSIVE LISTENING — NO PATROL INTERVAL, NO GAP IN COVERAGE	1 HUMAN CONFIRMATION REQUIRED BEFORE A FERRET EVER MOVES TO BLOCK	0 STRIKE AUTHORITY ANYWHERE IN THE LOOP
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OVERVIEW

A CHAIN OF BURIED EARS. ONE MONITORED LINE.

Part of the **4-system Underground line** — shares its envelope and doctrine with Mole, Ferret, Badger.

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Trembler Line CS-435 is not a vehicle — it is a system. Mole CS-430 sensor nodes, buried at intervals along a perimeter or a likely approach, listen passively and report over a dark-fibre trunk to a monitored head-end console. Nothing in the chain transmits outward; the fibre carries everything.

The line hears digging, tunnelling, footsteps and vehicles. It localizes the source from the arrival-time pattern across the chain — the node nearest the disturbance registers first, its neighbours a beat later, and the pattern places a rough position and bearing. A confirmed detection cues a Ferret CS-420 already staged nearby to move to an interpose position ahead of the intrusion path. Trembler Line is explicitly a detection-and-cueing system, not a weapon: it never strikes, and no part of it carries the authority to order one.

Node emplacement borrows the same discipline the group already practises. Three decades of horizontal-directional-drilling heritage in-house means surveying, locating and placing a tool in the ground blind is not new work for Canadian Shield — it is the trade a Mole node's emplacement survey draws directly from.

THE CLAIM

THE PERIMETER WATCHES. NOT THE SOLDIER.

The most exposed minute of a standing post is the walk to relieve it. Trembler Line stands the watch instead — buried, silent, always on — so the only moment that still needs a person is the one that actually matters: the confirmation before anything moves.

HOW IT WORKS

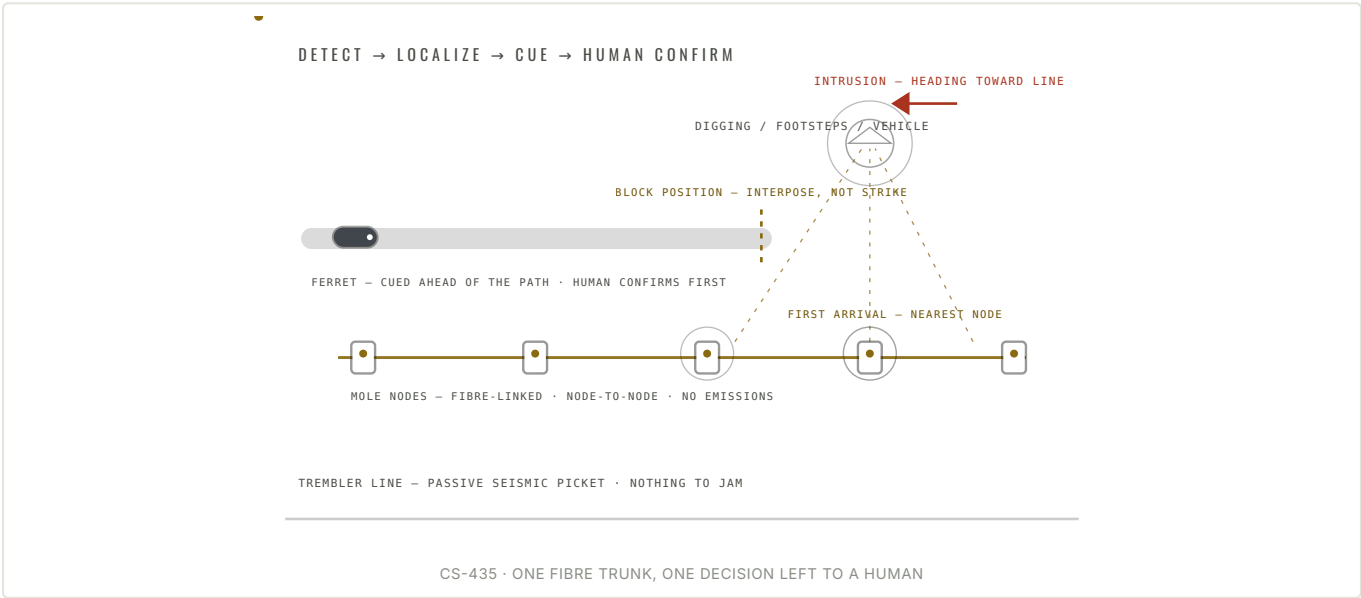
MECHANISM

A CHAIN OF NODES, ONE FIBRE, ONE DECISION LEFT TO A HUMAN

Mole nodes bury at survey-set intervals along the watched line, each one a passive seismic/acoustic listener with nothing broadcasting outward — the same physics-enforced no-radio, no-GPS rule that governs every underground platform in the family.

When something disturbs the ground — a dig, a tunnel advance, footsteps, a vehicle — the vibration reaches the nearest node first and its neighbours a beat later. The pattern of arrival times across the chain is the whole trick: it lets the head-end place the source's rough position and bearing without a single emission ever leaving the ground. This is time-of-arrival localization stated plainly, not a proprietary black box.

A localized detection becomes a cue pulse that travels the fibre trunk to the head-end console — never a decision on its own. A human reviews the cue; if it is confirmed, that human tasks a Ferret already staged nearby to move to an interpose position ahead of the intrusion path. The Ferret blocks. It does not strike. No warhead, fuze or energetic material exists anywhere in Trembler Line, at any point in the chain.



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

TREMBLER LINE

CS-435

CONFIGURATION	
System	Chained Mole CS-430 sensor nodes on a dark-fibre trunk to one monitored head-end
Node spacing	Interval class — survey-set per site, tens of metres per node

PERFORMANCE	
Localization accuracy	Coarse bearing + approximate range from arrival-time pattern — see Straight Talk
Detect-to-cue latency	Seconds-class, node to head-end over fibre
Node endurance	Years-class buried battery — tied to the Mole CS-430 baseline

NETWORK & POWER	
Network topology	Fibre trunk · node-to-node · single monitored head-end
Power model	Buried long-life battery per node; head-end on field or mains power

PAYLOAD & EFFECT	
False-positive discrimination	Open — under active development, stated plainly in Straight Talk
Response	Cues a staged Ferret CS-420 to move to an interpose position — never strikes
Strike authority	None, anywhere in the loop — detect, localize, cue only

MATERIALS & CONSTRUCTION	
Node emplacement	Surveyed and buried using the group's horizontal-directional-drilling locate discipline

SIGNATURE & POWER	
Emissions, any tier	None — no radio, no GNSS anywhere in the system

COMPLIANCE	
Patent status	Patent pending
Export control	Export-controlled — international transfer subject to Canadian government permits; export posture is counsel-first
Munitions classification	No warhead, fuze or energetic material anywhere in the system; no strike authority exists anywhere in the loop

LOCALIZATION ACCURACY AND FALSE-POSITIVE DISCRIMINATION ARE STATED AS OPEN ENGINEERING QUESTIONS, NOT NUMBERS DRESSED UP TO LOOK SETTLED — THAT IS HOUSE POLICY, NOT FINE PRINT.

THE TRADES, STATED

DETECT. LOCALIZE. CUE. NEVER STRIKE.

The fleet's thesis is that the link is the vulnerability — so Trembler Line carries none. Every byte the system moves rides the buried fibre trunk, node to node, to one monitored head-end. There is no spectrum in the loop to jam, because there is no spectrum in the loop at all.

Trembler Line is built entirely from two existing family members — it adds no new sensor and no new mobility. Mole CS-430 supplies the buried ear; Ferret CS-420 supplies the legs that move on a cue. The system's own engineering is the fibre network and the localization logic that ties the two together, and the discipline to keep a human deciding at every step. It slots directly into the family's "make the hole, work the hole" split: Badger and Aquifer make the hole, and Trembler Line is a passive perimeter watch that substitutes for a person walking a standing post over ground that already has one.

FAMILY CONTEXT

TWO PLATFORMS. ONE PICKET.

Mole listens, Ferret moves — Trembler Line is the fibre and the logic that chains them into a persistent watch. No warhead, fuze or energetic material anywhere in the system; the end state of the whole loop is a Ferret unit parked in the way, on a human's confirmation, always.

DEPLOYMENT

WATCHING A LINE, START TO FINISH.

A system-level walkthrough, illustrative of design intent, not a mission record. Trembler Line is a persistent system, not a single-run mission.

01 · INSTALL

SURVEY, SPACE, SPLICE

The perimeter or approach is surveyed first — the same pre-job discipline an HDD crew runs before any bore, applied here to node placement instead. Mole nodes are emplaced at survey-set intervals and left still; the fibre trunk is spliced node to node and run back to a monitored head-end console. No node broadcasts anything to confirm it is alive — the head-end confirms it over the wire.

02 · MONITOR

SILENT, CONTINUOUS, ALWAYS ON

Once live, the line runs unattended — passive listening, no patrol interval, no gap in coverage. Most of its life is quiet: nothing happens, nothing is sent, nothing is jammed because nothing is transmitted. On a disturbance the nodes register in sequence and the head-end localizes the source from the pattern across the chain.

03 · RESPOND

A HUMAN DECIDES, THEN A FERRET MOVES

A cue reaches a person at the head-end — never an actuator. If the cue is confirmed, that person tasks a Ferret already staged near the line to move to an interpose position ahead of the intrusion path. The Ferret blocks the way. It does not strike, and nothing upstream of it has the authority to order one either.

THE FAMILY

RELATED SYSTEMS

CS-430 · LISTENING NODE

MOLE

The buried ear strung into the Trembler Line perimeter.

CS-420 · PASSAGE-WORKER

FERRET

The legs — staged nearby, moves to a block position on a confirmed cue.

CS-410 · HOLE-MAKER

BADGER

The family anchor — bores the passages the rest of the family then works.

Trembler Line CS-435 · patent pending · export-controlled — international transfer requires Canadian government permits; export posture is counsel-first. A detection-and-cueing system for buried perimeters and approaches — it detects, localizes and cues; it never strikes, and no strike authority exists anywhere in the loop. No warhead, fuze or energetic material anywhere in the system; no radio and no GPS anywhere in the network. False-positive discrimination is an open engineering question under active development.



THE LINE THAT LISTENS SO NO ONE HAS TO WALK THE WIRE

TREMBLER LINE · UNDERGROUND · CS-435

Two platforms. One picket.

01

REQUEST A TECHNICAL EXCHANGE

A working session with engineering, not sales — bring your engagement problem, we bring the mechanism.

02

REQUEST THE UNDERGROUND FAMILY DATA PACK

Drawings, tolerances and test basis for Trembler Line and its siblings, gated behind export screening.

03

DISCUSS A TRIAL QUANTITY

Tell us end-user, jurisdiction, quantity band and timeline — we respond against your program, not a price list.

SALES

sales@cdnshield.ca

GENERAL

info@cdnshield.ca

WEB

cdnshield.ca

Direct lines, named points of contact and facility details are shared with qualified programs following screening — not withheld, sequenced.

Canadian Shield is a defence and industrial drone company, backed by SIG: four-domain uncrewed systems built for jammed, GPS-denied environments — no-radio by design, manufactured for cost and salvo depth.

Trembler Line CS-435

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