TIMBER SWEET AUSTRALIA

PULSE-M · LINK 16 SIGNAL MONITOR

The world's only true TSDF monitor.

Performance & Utilization Link 16 Signal Energy – Monitor.
Measure the actual Link 16 pulse load in your airspace, live, in the open air. Developed by Timber Sweet. Supplied and supported in Australia by Timber Sweet Australia.

PASSIVE | UNCLASSIFIED | NO CRYPTO | NO COMSEC



5 min
SET UP AND OPERATIONAL

1 case
SINGLE-PERSON PORTABLE

Passive
LISTENS ONLY. NEVER TRANSMITS

THE PROBLEM

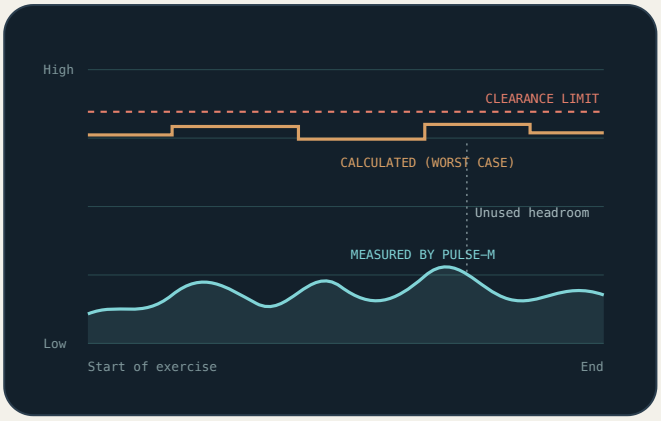
Link 16 shares its band with civil aviation.

Link 16 operates in 960 to 1215 MHz, the band set aside worldwide for aeronautical radio-navigation. Its use is governed by frequency clearance agreements, so pulse density has to stay within agreed limits.

01 **TSDF is calculated, not measured** when a Link 16 network monitor tool isn't used. It's derived from every time slot a platform is assigned, so it describes the worst case.

02 **Worst-case planning means large safety margins:** fewer platforms, tighter networks, harder clearances for training.

03 **PULSE-M measures what actually happens:** true TSDF from live pulses, with a permanent digital record you can share.



TIMBER SWEET

> "No COMSEC, No Crypto, No Headaches."

CAPABILITY

Complete monitoring of the airborne navigation spectrum.

True TSDF, measured

Directly measures time slot duty factor from live pulses in the open air: from assumed usage to actual measured usage.

Protect aids to navigation

Monitors down to the lowest level transmission and alerts users to potential interference at or near aids to navigation.

Detect rogue networks

Compares real-world activity with network monitoring tools to find rogue users, split networks and missing participants.

No COMSEC. No crypto.

Not a Controlled Cryptographic Item, so systems are easily stored, transported and operated.

Operating in five minutes

Single-person portable and rugged. Set up and operational within five minutes.

A record you can share

A permanent digital record for network designers, range and spectrum managers and program managers.

THE KIT

Everything in one case. Carried by one person.



01 · TRANSPORT CASE

Rugged, foam-fitted transit case

Every component has its place. Single-person portable, easily stored and transported.

Full technical specification available from Timber Sweet Australia on request.



02 · RECEIVER

Receiver unit

Commercial hardware running Timber Sweet's signal algorithms.



03 · ANTENNAS

Antennas and mounts

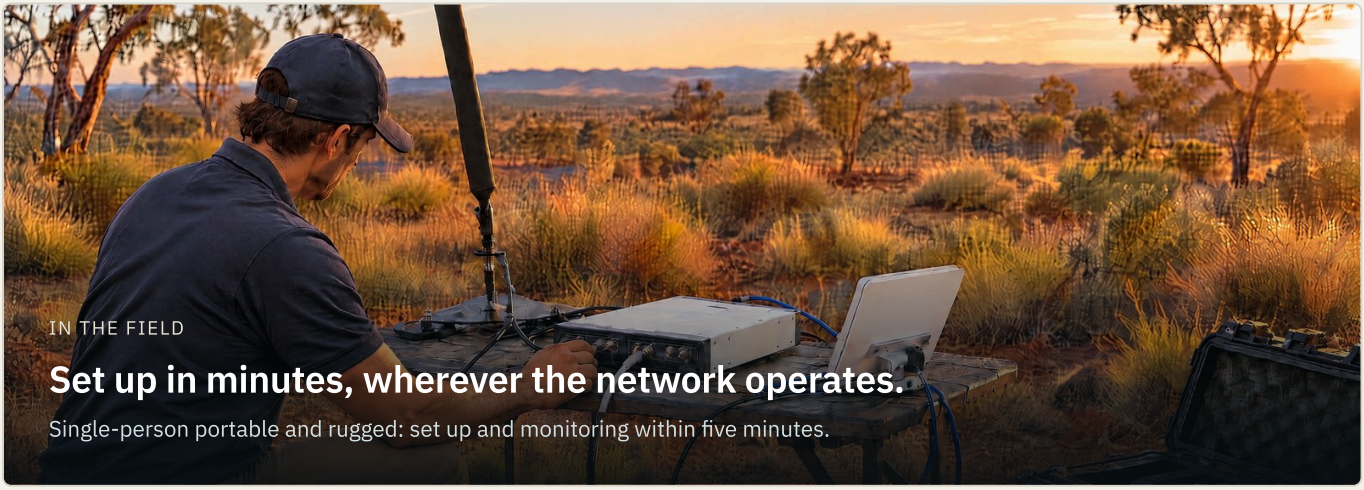
Passive antennas on stable magnetic mounts. Listens only.



04 · PACKED

Closed and ready to move

Latched and set up again within five minutes.



IN THE FIELD

Set up in minutes, wherever the network operates.

Single-person portable and rugged: set up and monitoring within five minutes.

01

Range and spectrum managers

Keep networks inside frequency clearance limits, with evidence.

02

Exercise planners

Plan on measured data and reduce compliance-related cancellations.

03

Network designers and JICOs

Find split networks, rogue platforms and missing participants.

04

Sensitive sites

Watch for potential interference near aids to navigation.

LINK 16 IN 60 SECONDS

One tactical picture. Thousands of pulses every second.

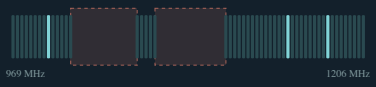
Air, sea, land and command platforms share one picture over Link 16, taking turns to transmit in time slots and hopping across frequencies. PULSE-M sits on the ground and listens to all of it, without joining the network.

TIME SLOTS (TDMA)



12-second frame of 1,536 time slots of 7.8125 ms, interleaved into sets A, B and C.

FREQUENCY HOPPING



51 frequencies, 3 MHz apart. No transmissions 1008–1053 or 1065–1113 MHz, keeping IFF and TCAS clear.

TIME SLOT DUTY FACTOR

100/50

EXAMPLE TSDF LIMIT

Total use in an area as a share of 396,288 possible pulses per 12 seconds, and the share any one user may take.

Link 16 figures: Northrop Grumman, Understanding Voice and Data Link Networking (Dec 2014, approved for public release 13-2457).

CONTACT US

Talk to Timber Sweet Australia about PULSE-M.

Ask for a demonstration, a quote or the full technical specification. A director will come back to you.

enquiries@lowlosssolutions.com.au

TIMBER SWEET AUSTRALIA

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PULSE-M is developed by Timber Sweet (USA). For U.S. and other international enquiries, please contact Timber Sweet: timber-sweet.com

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