



[www.polescan.com](http://www.polescan.com)

FAST, ACCURATE &  
COST EFFECTIVE

UNIQUE ULTRASONIC TECHNOLOGY



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# OVERVIEW

Polescan is a non-destructive pole inspection system designed to evaluate the condition of wooden utility poles using ultrasound technology, where the results are presented on a PDA, onsite and then calculates the Remaining Strength Percentage, M.O.R(psi) and Breaking Strength(lbf) of the pole tested.



TIMBER PROBE TOOL

## CUTTING EDGE

Polescan is a non-destructive pole inspection system designed to evaluate the condition of wooden utility poles using ultrasound technology, where results are presented on a PDA to the inspector at the inspection site.

## PROVEN RESULTS

The Polescan system has been developed by IAMSL in New Zealand over the past ten years by a number of highly experienced Line Engineers and Software developers. The system has successfully been used on more than 100,000 wood poles throughout New Zealand, Australia and the Middle-East producing highly accurate results and increased workflow efficiencies for the companies involved.



MANUAL SCANNER

## THE SCANNER

The scanner is an ultrasonic test unit for use in making single pulse transmission time measurements in solid samples. The scanner consists of three units - a transmitter probe (red), a receiver probe (blue) and a display module (silver) that receives the readings in microseconds.

The unit operates by the transmitter probe sending an

acoustic pulse through the tip of the probe and timing the subsequent interval until the pulse is successfully detected at the receiver probe. The transmission time will depend on the propagation within the sample and the thickness of the sample.

## TIMBER PROBE TOOL

The Polescan system also requires the user to determine any below groundline external decay. This is carried out by completing minor excavation to approximately 18 to 24 inches below the test level at groundline in three to four areas around the pole base. The timber probe tool then measures any external soft timber or decay. If any pole preservative or treatment is required, further excavation can proceed.

## BENEFITS

The Polescan System delivers highly objective and dependable data on the condition of wooden utility poles, eliminating the current human reliance on subjective testing techniques. Polescan delivers fast, accurate and instantaneous results, allowing network managers to prioritize pole replacements and leave good poles in service.

## WHO IS IAMSL?

IAMSL is an overhead line consultancy and contracting company that is focused on assisting Line Networks with the design and management of their overhead line assets.

IAMSL have been inspecting Line Network assets for the past 7 years. We have developed inspection and engineering applications to ensure strict conformance with New Zealand, Australian and American line design standards. We have a team of software developers, engineers and technicians with many years of asset inspection/management experience in New Zealand, Australia and the Middle East.

Our line technicians are trained to understand the importance of accurate engineering data capture and analysis. They are competent users of all hardware and software used to determine the structural integrity of poles. The industry experience of our technicians combined with training, QA systems and a clear understanding of client standards and policies allows IAMSL to deliver consistent engineering-based solutions to our clients.

IAMSL inspects poles using non-destructive techniques, capture engineering and condition data. We use purpose-built software to calculate loads and analyse the Serviceability

(Serviceability Index) Safety Factor or Reliability (Reliability Index) or POF (Probability of Failure) of poles. With these applications, we design replacement poles that conform to the required line design standards. We work according to proscribed client inspection standards.

IAMSL has completed this type of work throughout New Zealand, Australia and the Middle East (Oman) with a number of Utility companies showing strong interest in several countries.

In 2007, IAMSL was quality accredited to ISO 9001 through Telarc SAI.

## WHAT PRODUCTS AND SERVICES DO IAMSL OFFER?

- ✦ Polescan (Non Destructive Wood Pole Evaluation Tool)
- ✦ LSE Patrol (Line Engineering Tool)
- ✦ Poles Database (Supports LSE Patrol)
- ✦ Line Asset and GPS Data Collection Services
- ✦ Line Structure Design (Advanced Line Engineering Tool)
- ✦ Line Structure (Probability of Failure)
- ✦ Line Asset Management Consultancy Services

For more information on IAMSL, Polescan or any of our other products and services, please visit [www.polescan.com](http://www.polescan.com)

# POLESCAN PROCEDURE

## DETECTING EXTERNAL AND INTERNAL DECAY

