

# AQUASCAN

Trunk Main Leak Locating Correlator

*with True Sound Sensors*

*High-end correlator designed specifically to find leaks on large diameter pipes over long distances. Extremely user-friendly using radio-controlled True Sound Sensors for unprecedented leak detection performance in all field conditions.*



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## Trunk Main Leak Locating Correlator

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### True Sound Sensors - outstanding performance

The AQUASCAN TM3 is the first real-time correlator for water distribution networks using radio-controlled sensor filter settings. This unique feature allows the digital prefilters to adjust to the leak noise directly within the sensor. The result is a much-improved sensitivity, and dynamic range. AQUASCAN TM3 users can select from a set of specific filters for trunk mains to find more leaks more reliably at greater distances on large diameter pipes even under challenging conditions.

The entirely newly developed True Sound Sensor (TSS) accelerometer has ten times increased leak noise sensitivity, correlation results are available at unprecedented speed, and with 50mm diameter it is by far the smallest in the market. It features a USB-C port for fast charging and a hydrophone connection as well a dual mode up and downlink radio for controlling the sensor and to transmit the leak noise in real time.



### New Android software easy and flexible in use

The versatile real-time correlator AQUASCAN TM3 is fit for all purposes. GUTERMANN's new AQUASCAN TM3 APP software provides the same simple and easy-to-navigate user interface and all features of the AQUASCAN 760T plus unique features for trunk main leak detection such as trunk main filter settings, map visualization, import GIS/KML files and the possibility to upload results into the GUTERMANN cloud (available in evolution release).

The industry leading sophisticated "Auto Filter" remains available in the processing display unit. It automatically selects the most relevant frequency bands of interest and amplifies them further to generate an accentuated peak. No more playing around with manual filters to try to identify possible leak noise sources. No more ambiguity about the existence of a leak. The AQUASCAN TM3 does it, particularly on plastic and large diameter pipes.



### COMMLINK PRO with dual-mode radio

The AQUASCAN TM3 builds on the proven design of the legendary AQUASCAN TM2 real-time correlator. The new COMMLINK PRO features the dual-mode radio: The well-known analogue radio for the real-time noise data with no latency, and the new digital control radio using LoRa modulation for outstanding distance. allows to switch sensors on and off and to change the filters remotely in both True Sound Sensors. The COMMLINK PRO is connected via Bluetooth to the processing unit.

The firmware can be upgraded via the USB-C charging port and will include in the next evolution the capability to read and configure ZONESCAN 850 and MULTISCAN 2 leak detection devices. Thus, only a single communication link unit will be needed for the operator to perform different leak detection scenarios from lift & shift over offline correlation to real-time correlation using True Sound Sensors.



### Secure Cloud

The AQUASCAN TM3 allows registered users to upload their measurements into the GUTERMANN CLOUD which offers a Google Maps™ and Street View™ based user interface. The AQUASCAN TM3 correlation files can be saved and exported for safekeeping, subsequent analysis or re-correlation, or for second opinion by a GUTERMANN expert.

This way it can interact with the ZONESCAN noise logger range, MULTISCAN multi-point correlator and ZONELOG data logger for long-term asset management.

An event management tool facilitates an efficient workflow and classification of leak alarms, tracking active and repaired leaks, and the generation of detailed leak reports.

As with all Gutermaann products, the AQUASCAN TM3 includes free firmware and software updates for the lifetime of the device.

### System Configuration

- 1 Correlator receiver (COMMLINK PRO)
- 1 Pair of stereo headphones
- 2 TSS Accelerometer sensor-transmitters (True Sound Sensors)
- 1 Pair of stainless-steel hydrophones
- 1 12V USB-C High power vehicle charger
- 1 110-240V AC USB-C High power charger
- 2 Antenna tripods & cables
- 2 Years warranty
- 1 Android tablet with 5G connectivity, Gutermaann Software pre-installed
- 1 Carry case

### Technical Specifications

Pipe Material:	All common pipe materials; mixed material mode
Sound Velocity:	Integrated sound velocity table and on-site velocity check
App Filters:	Auto-filter and manual filters
TSS Filters:	Trunk main and distribution network filters for metal and plastic pipes, hydrophone mode, notch filter
Frequency Analysis:	High-resolution Fast Fourier Transform (FFT), coherence analysis and cross-spectrum analysis
Frequency Response:	1-5000 Hz
Peak Suppression:	Unlimited, user selectable
Maximum Correlation:	Unlimited recording time per correlation
Memory Capacity:	Limited only by size of tablet memory card; optional post-processing of correlation with changed parameters
True Sound Sensors:	Ultra compact high sensitivity piezo-ceramic sensors with integrated dual mode radio for correlation signal and control radio
Sensitivity:	Better than 0.5µm/s <sup>2</sup> at 400Hz
Connection:	Multi-purpose USB-C socket for battery charging, firmware update, connecting hydrophones, ground microphone or hand-probe
Power:	Rechargeable 3.7V Lithium-polymer battery
Charge Life:	up to 8 hours
Dimensions:	COMMLINK PRO: w:205 x h:130 x d: 35 mm, True Sound Sensors: Ø50x160 mm
Weight:	COMMLINK PRO: 0.6 kg, True Sound Sensor: 1 kg



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