



TFN VS05 Audio Video Life Detector



Product Introduction

The VS05 Audio & Video Life Detector is a rapid rescue system integrating vibration signal listening, video search, and two-way communication with trapped victims. Designed for post-disaster scenarios such as earthquakes, explosions, and collapsed structures, it uses a specialized microprocessor to identify faint vibrations transmitted through air and solid materials like concrete and metal. The system filters background noise and accurately detects human sounds including tapping, scratching, shouting, or knocking. With an infrared rotating camera for zero-light environments and a lightweight, portable design, the VS05 dramatically reduces search time and increases survival rates, making it the preferred choice for fire rescue, civil defense, police, and military teams worldwide.

Product Key Selling Points

10.1-Inch Color LCD with Sun Visor & Remote Control

The VS05 features a large 10.1-inch color LCD screen (1024 × 768 resolution) with a built-in sun visor for clear outdoor viewing. The host supports brightness, color, and contrast adjustment, plus multi-language display. A dedicated remote control allows easy operation of language settings, time adjustment, recording resolution, video format, and playback. This user-friendly interface ensures rescue teams can focus on searching without fumbling with complicated controls, even under bright sunlight or dark conditions.

Two-Way Voice Communication with Recording & Playback

Integrated two-way audio enables rescue personnel to speak directly with trapped survivors and hear their responses. The system supports voice recording and playback, allowing evidence documentation and repeated listening to faint calls for help. This real-time verbal connection provides psychological reassurance to victims and helps rescuers accurately locate survivors through sound direction, drastically improving coordination and reducing false digs.



Ultra-Long Reach & Flexible Probe Design

The telescopic rod extends from 1.05m (closed) to 2.21m (fully extended), and the probe tip can be bent arbitrarily to navigate through rubble, narrow gaps, or collapsed slabs. An optional 20-meter extension cable connects directly to the probe or rod, achieving a total detection distance of over 25 meters. This flexibility allows rescuers to reach deep void spaces without endangering themselves, making the VS05 ideal for complex urban search and rescue (USAR) environments.

Dual Probe Options: Infrared Waterproof & Laser-Point Voice Probe

The VS05 comes with two interchangeable probes. The infrared waterproof probe (IP67, <25mm diameter) features 8 infrared LEDs and 720 lines resolution, offering 6m+ visibility in total darkness and can be submerged up to 2 meters. The laser-point voice probe integrates a sensitive omnidirectional audio vibration sensor, covering >200 m² search area, with a built-in microphone, speaker, laser pointer, and side warning light. This combination enables both visual and auditory searches through concrete, metal, and wood.

Remote Video Transmission via 4G & WiFi (Optional)

The host supports 4G and WiFi transmission (optional), allowing real-time video sharing across multiple terminals without distance limitations. Over 10 smart devices can view the scene simultaneously, and any terminal can bind up to 4 video transmission modules. This feature enables remote command centers, off-site experts, or multiple team leaders to monitor rescue progress in real time, improving decision-making and operational safety.

Product Specifications

Host

1. Display: 10.1-inch color LCD with sun visor, 1024(RGB)×768(XGA) resolution
2. Adjustable brightness, color, saturation; multi-language support
3. Video recording & playback, max expansion memory 32GB
4. Two-way voice intercom, supports recording & broadcast
5. Probe types: Laser-point voice intercom probe + Infrared waterproof probe
6. Battery: Rechargeable lithium battery, 6+ hours working time per charge
7. Remote control for language, time, recording resolution, video format, playback
8. Host built-in lighting (can be used as flashlight in dark environments)
9. External video output to third-party screens for command convenience

Remote Wireless Video Transmission (Optional)

10. Transmission modes: WiFi, hotspot, 4G
11. No distance limit; supports 10+ smart terminals simultaneously
12. Any smart terminal can bind up to 4 transmission modules for multi-view

Infrared Waterproof Probe

13. 8 infrared LEDs, auto light sensing; minimum illumination 0 Lux
14. CCD night vision, 720 TV lines; visible range >6m in darkness
15. Outer diameter <25mm; sensor $\geq 1/3''$ CMOS; viewing angle 120°
16. Waterproof rating: IP67



Laser-Point Voice Intercom Probe

17. Built-in microphone and speaker for two-way intercom
18. 8 infrared LEDs (auto on/off) + 6 LED lights (switchable, auxiliary illumination)
19. Resolution 540 TV lines; night vision >6m
20. Built-in laser point for focusing and positioning
21. Side warning light to help trapped persons locate the rescuer
22. Outer diameter <40mm; sensor $\geq 1/3''$ CMOS; viewing angle 120°
23. Omnidirectional audio vibration sensor, search area >200 m², frequency range 300-5500Hz

Noise-Canceling Headset

24. Amplifies faint victim sounds
25. High-gain microphone for low-amplitude sound
26. Built-in audio module for two-way talk
27. Audio compression circuit: makes weak sounds louder, strong sounds softer
28. Volume control key

Telescopic Rod & Extension Cable

29. Closed length: 1.05m; Extended length: 2.21m
30. 20-meter independent extension cable (can connect directly to probe or rod)
31. Max detection distance >25m

General

32. Weight and dimensions: not specified in document (portable design implied)

Product Features

Feature 1: Vibration Signal Detection for Trapped Survivors Through Rubble

The VS05's specialized microprocessor can detect the faintest vibrations transmitted through solid media such as concrete, metal, and wood. Unlike ordinary microphones that pick up surface noise, this system isolates vibrations caused by tapping, scratching, scraping, or knocking from trapped individuals under collapsed structures. It actively filters out ambient background noise (wind, machinery, traffic), amplifying only relevant human-origin signals. For rescue teams, this solves the critical pain point of “searching blindly” in piles of debris. Instead of digging randomly or relying on visual access alone, teams can systematically scan large areas, pinpoint the exact location of survivors, and prioritize rescue efforts. This function is especially valuable in the “golden 72 hours” after a disaster, where every minute counts. The result is higher survival rates, reduced unnecessary excavation, and less physical strain on rescuers.

Feature 2: Two-Way Talk & Audio Recording for Psychological Support and Confirmation

The integrated two-way voice communication allows rescuers to speak directly with trapped victims and hear their responses in real time. This is not just a listening device – it enables full dialogue. Rescuers can guide victims to tap or shout, confirm their condition, and provide reassurance while digging continues. The system records all conversations for post-incident analysis or legal documentation. The key pain point solved here is the isolation and fear experienced by trapped persons – hearing a human voice significantly reduces panic and helps victims preserve energy and hope. For rescue teams, verbal feedback confirms that a person is alive and responsive, helping prioritize victims with urgent medical needs. In noisy environments



(collapsed factories, earthquake zones), the noise-canceling headset ensures clear communication, turning chaotic scenes into coordinated rescue operations.

Feature 3: Infrared & LED Lighting for Zero-Light and Low-Visibility Environments

Both probes come equipped with multiple infrared and LED lights. The infrared waterproof probe (8 IR LEDs) provides over 6 meters of clear visibility in complete darkness, automatically switching IR on/off based on ambient light. The laser-point voice probe adds 6 switchable LED lights for auxiliary illumination and a laser pointer for precise targeting. This solves the major challenge of searching in collapsed basements, underground parking lots, night-time disasters, or smoke-filled rooms. Traditional flashlights can create glare or wash out camera images, but the VS05’s optimized IR spectrum delivers sharp, contrast-rich video even in zero-Lux conditions. The waterproof version (IP67) allows submerged searches up to 2 meters – essential for floods, pipe systems, or water-filled voids. Rescue teams no longer need to wait for daylight or bring bulky lighting equipment; the VS05 works anytime, anywhere.

Feature 4: Ultra-Long Reach & Articulating Probe for Deep Void Access

The telescopic rod extends to 2.21 meters, and the probe tip can be bent into virtually any shape to navigate through twisted rebar, narrow gaps, or L-shaped corners. Adding the 20-meter extension cable extends the total reach beyond 25 meters. This combines the benefits of a small-diameter probe (<25mm for IR probe, <40mm for voice probe) with extreme length – ideal for inserting through boreholes, ventilation shafts, or cracks in concrete slabs without dismantling the structure. The pain point addressed is the physical inaccessibility of trapped victims: many collapses leave survivors in deep voids that rescuers cannot enter due to stability risks or size constraints. With the VS05, teams can snake the camera deep into the rubble, rotate 120° wide-angle views, and communicate with victims up to 25 meters away. This reduces the need for heavy breaching equipment, speeds up initial assessment, and keeps rescuers safe.

Feature 5: Remote Video Sharing for Command Center Coordination (Optional 4G/WiFi)

When equipped with the optional wireless transmission module, the VS05 streams live audio and video to unlimited distances via 4G, WiFi, or hotspot – even without internet (local hotspot works). More than 10 smart devices (tablets, phones, command monitors) can view the feed simultaneously, and any terminal can bind up to 4 different modules for multi-angle surveillance. This solves a critical organizational pain point: information silos. Without real-time sharing, rescue commanders must rely on verbal radio reports, which are often delayed or inaccurate. The VS05 enables off-site experts (doctors, structural engineers) to see the same images as on-site teams, providing remote guidance. Multiple team leaders can coordinate simultaneously, avoiding duplication of effort. Recorded footage can be used for training, debriefing, or evidence. This transforms a single search device into a networked situational awareness tool, essential for large-scale disasters.

Applications & Pain Points Solved

Scenario	Customer Pain Point	VS05 Solution
Earthquake Collapse –	Victims trapped deep under layered concrete, no visual	VS05’s vibration sensor detects tapping/scraping through solid concrete;



Concrete Slabs	access, ambient noise from aftershocks and machinery masks faint tapping.	background noise filter isolates survivor sounds; two-way talk confirms life and location.
Building Explosion (Gas or Intentional)	Rescuers cannot enter unstable structures; limited visibility due to dust and darkness; risk of secondary collapse.	2.21m telescopic rod + flexible probe reaches deep through small openings without entry; IR camera sees through dust/darkness; 20m cable extends range.
Flood or Water-Filled Basement	Submerged victims may be trapped in dark, murky water; standard electronics fail when wet.	Infrared waterproof probe (IP67) operates at 2m depth; 0 Lux visibility >6m; two-way audio works through water-air interface.
Night-Time Wildfire or Mountain Search	Poor natural light, vast search area, victims may be unconscious or too weak to shout.	IR night vision + side warning light helps victims see rescuer; laser pointer pinpoints location; remote video transmission allows multiple teams to coordinate.
Confined Space Rescue (Silos, Tanks, Pipes)	Limited access ports (e.g., 30mm holes); cannot send human rescuer inside; need to verify if person is alive before cutting.	IR probe diameter <25mm fits through tiny openings; 120° wide-angle view covers interior; two-way talk checks responsiveness; recording provides evidence for safety planning.

Q&A

Q1: Can the VS05 detect survivors through thick concrete walls?

A: Yes. The VS05 is specifically engineered to detect vibrations transmitted through solid media including reinforced concrete, brick, metal, and wood. Its audio vibration sensor covers >200 m² and frequencies 300-5500Hz, filtering out ambient noise to isolate human-made sounds like tapping, scratching, or knocking. However, solid steel or lead-lined walls may reduce sensitivity – always use the probe’s direct contact or near-contact placement for best results.

Q2: How long does the battery last in continuous field operation?

A: The host’s rechargeable lithium battery provides over 6 hours of continuous operation (video + audio + two-way talk). For extended missions, you can swap with the included spare battery pack (configuration includes a battery pack). The system also supports external power via the 12V charger, allowing connection to vehicle power or portable generators.

Q3: Is the wireless video transmission feature mandatory, and can it work without internet?

A: The 4G/WiFi transmission is an optional add-on (clearly marked “optional” in the specs). When equipped, it works in two ways: (1) via local WiFi or hotspot – no internet required, devices connect directly within range; (2) via 4G SIM card – unlimited distance if cellular signal exists. Without the optional module, the VS05 still functions as a standalone detector with all core features (video, audio, recording, two-way talk).



Q4: Can the probe be sterilized or cleaned after use in hazardous environments?

A: The IR waterproof probe is IP67-rated, meaning it can be submerged in clean water for cleaning and disinfection. Use mild detergent and soft cloth – avoid abrasive materials. The laser-point voice probe is not fully waterproof (no IP rating given) but can be wiped with disinfectant wipes. Always power off and disconnect probes before cleaning.

Q5: What languages does the on-screen menu support?

A: The VS05 host supports multi-language display, including English, Chinese, Spanish, French, Arabic, and Russian (exact list may vary by firmware). To switch languages, use the included remote control or host buttons. This makes the device suitable for international rescue teams operating in diverse regions.

Package Contents

VS05 Host (main control unit) *1
Laser-point voice intercom probe *1
Infrared waterproof probe *1
20-meter extension cable (on reel) *1
Noise-canceling headset *1 pair
Telescopic rod *1
Remote control *1
Video cable *1
Converter *1
Battery pack *1
12V charger *1
Screwdriver *1
Shoulder strap & waist belt *1
Screen cleaning kit *1
User manual *1
Certificate of quality & warranty card *1
Operation video (USB drive) *1

> Note: Optional 4G/WiFi transmission module is not included in standard package; please specify when ordering.