Utility Inspection System

Remotely inspect vaults and confined spaces or potentially hazardous, inaccessible areas.
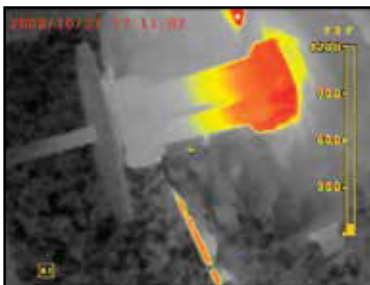
A Utility Inspection System enables inspections to be carried out from a safe distance outside of a confined space or hard to reach, hazardous area.

The System increases worker safety, reduces costs, improves productivity and provides video documentation of inspection findings. Utility inspection systems are modular and expandable, with a variety of camera and pole technologies to utilize as needed.

10:1 Color Zoom Camera

Optional Thermal Camera

Video Image

Thermal Image

Confined Space Entry & Assessments

The Utility Inspection System allows the user to complete a visual assessment of underground utility vaults, tanks, large vessels, voids and other difficult to reach, or hazardous areas without the need to enter a confined space or other dangerous area.

This initial visual assessment allows the inspector to understand the nature of any potential equipment problem or hazard, (entanglement, flooding, arcing, vermin infestation, etc.) while safely out of harm's way. Avoiding this initial confined space entry during the inspection/assessment phase of the process increases both the efficiency and overall safety of any maintenance-repair operation.

Recording & Documentation

The system's recording option allows live and still video images to be captured and stored onto a removable SD memory card for inclusion into reports or for off-site analysis.

System Configuration

The system consists of a display and a 10x optical zoom camera mounted on a telescoping, articulating pole that is submersible in water. The operator views the images on a body-worn or tripod-mounted, 5.6" sunlight-readable display. Optional thermal camera components allow the operator to "see" overheated splices and other hot spots visually – even through smoke. Other compatible accessories include: different camera types, displays, and poles of different styles and lengths.

The Utility Inspection System increases inspection safety and efficiency, while reducing operating costs. All of our systems are weatherproof, battery-powered, portable, durable, lightweight, compact, and made in the USA.

Applications

- Confined space/entanglement safety inspection
- Triage and safety inspection of vault and tunnel failure events
- Preventive maintenance of degrading components (hot spots) with thermal imagery
- Asset inventory & maintenance documentation

Features & Benefits

- Cost-effective solution – increases safety and efficiency
- Portable, rugged, weatherproof and battery-operated
- Interchangeable camera options: Dual View Thermal/B&W, self-illuminated 10:1 color zoom and a variety of self-illuminated cameras
- Tripod mounted or body-worn display
- Various length, telescoping fiberglass extension poles – fixed, adjustable end or remote articulating
- Built-in DVR for documentation of findings
- Optional thermal imager sees temperature differences through smoke and in total darkness

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WalkAbout® DVR is a battery-powered, weatherproof, video monitor and DVR, with on-screen indicators for battery life and LED intensity.

10X optical zoom for close-up, higher detail images

180 degree (+/- 90 degree) articulation with a twist of the hand grip allowing for vertical and horizontal panning

Pole has easy to use locking collars between sections and is waterproof and submersible. Poles quickly connect and disconnect from the display.

Recommended Additions:

THC-50D Dual-mode Thermal Camera*
Locate elevated temperature components through smoke and darkness. Switch to visible light camera for better object identification

Tough Grabber USB Receiver and WXMT Transmitter
Wireless connection and software to a laptop for a "second pair of eyes" and recording capability (laptop not included).

USB Cable Laptop Interface
Low-cost wired connection from Walkabout display to laptop. Includes software for recording and photo annotation.

ExplorerSCOPE®
Gain visual access into compartments through openings as small as .4" (10mm). This self-contained scope can generate images of objects that are 40' (12M) away – in pitch darkness.

AAM Audio Module
Omni-directional microphone with high gain amplifier. Mounts between camera and pole. Used to listen for arcing noise.

Additional Poles
Pole lengths available from 2' to 40' (.7-12M), in both articulating and flex-end extension styles. 20'+ available in lightweight, carbon fiber (conductive) with flex-end only.

Cable Reel
Reel contains 166' (50M) of ultra low loss video and audio signal transmission cable that has depth markers every five feet. The cable provides constant video and audio signals even while it is being spooled on and off the reel.

System includes: 5.6" LCD WalkAbout DVR display, WPC-2.5 color zoom camera, AP-T14 telescoping/articulating 14' pole, two NiMH rechargeable batteries & charger, tripod with bracket and universal chest harness for display and custom hard carry case.

Utility Inspection System Specifications

Part Number/Ordering

I A D - U S Z T - A 1 4 [1]

DISPLAYS
IAD=Detached WalkAbout w/DVR
IAD=Standard WalkAbout w/DVR
IS=Detached WalkAbout w/o DVR
IA=Standard WalkAbout w/o DVR

TRIPOD
T=Tripod
Blank=No Tripod

POLES
A9=9' Articulating Pole
A14=14' Articulating Pole
14=14' Gooseneck Pole

1) Add a "-N" to system part number to specify a Universal Power Supply

Order power cord separately at no charge.

	WalkAbout III (w/o DVR)	WalkAbout DVR
Display Size & Weight	Standard: 6.9"W x 9.4"H x 3.7"D / 3.5 lbs. (17.6 x 24 x 9.4cm / 1.58kg) Detached Base: 5.5"W x 3.7"H x 2.7"D / 1.5 lbs. (13.9 x 9.4 x 6.9cm / .66kg); LCD: 6.6"W x 7.5"H x 1.3"D / 2.5 lbs. (16.9 x 19.1 x 3.5cm / 1.13kg)	Standard: 8.8"W x 9.3"H x 4.3"D / 3.6 lbs. (22.4 x 23.6 x 10.9cm / 1.65kg) Detached Base: 6.3"W x 4.3"H x 2.9"D / 1.7 lbs. (15.9 x 10.9 x 7.3cm / .79kg); LCD: 6.6"W x 7.5"H x 1.3"D / 2.5 lbs. (16.9 x 19.1 x 3.5cm / 1.13kg)
Construction	Rubber encapsulated aluminum LCD case for shock resistance and weatherproofing	
Display Size	5.6" (14.2cm) measured diagonally	
Resolution	640 x 480	
Operating Temperature	-4°F to 158°F (-20°C to 70°C)	-14°F to 158°F (-10°C to 70°C)
LCD Controls	Brightness, contrast, color, tint, mirror, backlight & sharpness	
Mounting Options	Display can be worn on vest, belt or harness; detached display can also be handheld	
Video Format	Auto switches between NTSC (American) or PAL (European)	
Charger	12VDC from either power supply or vehicle adapter	
Batteries	NiMH, 7.2V, 2.7AH	
Discharge Time	2 hrs. with LEDs off	1.66 hrs. with camera LEDs off
Charge Time	2 hrs. when fully discharged	
Base Controls & Indicators	On/Off switch & LED; Camera illumination control & LED; Low battery LED;	On/Off switch & LED; Camera illumination control & LED; Low battery LED; DVR controls
Connections	Camera (pole), A/V output, DC input (7.2V to 12V)	
DVR	None	Up to 32GB SD card; 250 stills per GB; 1hr per GB for H.264 videos

Camera

Model	WPC-2.5Z	THC-50D* (optional)
Construction	Submersible enclosure with hard-coated window	Dual Mode Thermal camera with temperature display
Size & Weight	2.5"D x 4.0"L/0.66 lbs. (64mm x 102mm/0.3kg)	1.9" dia. X 6.5" long/0.82 lbs. (49mm x 166mm/0.37kg)
Features	24 Bright white LED illuminated, color camera, 480 TV Lines, 10:1 optical zoom (5° to 46° FOV)	Microbolometer thermal sensor and B&W LED illuminated video, switchable from display unit. 50° FOV

Cases

Model	A-CASE	T-CASE	
Part of System	IAD-USZT-A9	IAD-USZT-A14	IAD-USZT14
Construction	Rugged, watertight, plastic carry case with foam inserts having compartments for all components.		
Size	53" x 17" x 6" (135 x 44 x16cm)		
Weight loaded	37 lbs. (17kg)	40 lbs. (18kg)	38 lbs. (17kg)

Poles

Model	AP-T9	AP-T14	T-FNS-14
Part of System	IAD-USZT-A9	IAD-USZT-A14	IAD-USZT14
Construction	3 Section telescoping pole, 2 internal aluminum sections and an external fiberglass section with foam grip	6 Section telescoping pole, 5 internal aluminum and an external fiberglass section with foam grip	4 Section fiberglass telescoping
Collars	Rugged, break-proof, easy grip, twist collars for each pole section.		
Articulation	Mechanical pull cable system operated by an easy-to-use twist handle. Camera range of ± 90° with detents. Twist collar allows camera angle to be locked at any position.		1 foot flexible gooseneck can be flexed into any position
Collapsed Length	4 ft. 3 in. (1.3M)	4 ft. 1 in. (1.2M)	4 ft. (1.22M) with gooseneck folded
Extended Length	8 ft. 7 in. (2.6M)	14 ft. 1 in. (9.3M)	13 ft. 11 in. (4.24M)
Weight	6.4 lbs. (2.9kg)	8.1 lbs. (3.7kg)	5.3 lbs. (2.4kg)