elaman
GERMAN SECURITY SOLUTIONS

VSR
Video Surveillance Recorders

Video Surveillance Recorders

Ref	Number	Description
1	5608	Digital Video Audio Recorder
2	5609	Super Thin Video Audio Recorder
3	Access	Optional Accessories for 5608 and 5609
4	5610	Concealed Camera Video/Audio Recorder in a Key Ring
5	5601	Body-Worn Digital Video/Audio Recorder
6	5602	Portable Video/Audio Recorder
7	5603	Concealed Body-Worn Video/Audio Recorder
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9	5611	Rugged Portable DVR Recorder
10	5612	Digital DVR Video/Audio Recording System
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13	5615	Interrogation Room Kit

DIGITAL VIDEO AUDIO RECORDER

The Digital Video-Audio Recorder is a miniaturized, solid state, standalone device, which can be utilized for covert remote video and audio recording.

The unit's small metallic enclosure and totally silent operation make it suitable for most covert activities where stealth and long-term reliability is the key to success.

The unit can record stereo audio and color or black white video from 1 to 15 frames per second, and image sizes of up to 640x480 pixels utilizing a standard composite video camera input.

The digital recorder will record up to four hours of color video and can be expanded to 8 hours by adding additional memory card.

Recorded date may be transferred, viewed, edited and archived on a standard PC.

SYSTEM FEATURES

- Dual camera audio/video
- 4 hrs of color VGA video and Audio, 30FPS
- Optional 4hr/30FPS memory cards
- Shirt button and pin-hole camera included
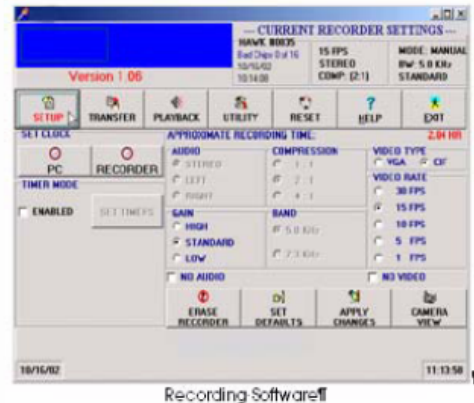- Optional Wireless Remote interface

DUAL CAMERA

Two camera sets with external power, great for use in cars, buildings, and open areas.

SPECIFICATIONS

Size:		5.33 x 4.82 x 1.19 cm
Weight:		56 g
Operating Voltage:		2.1V – 3.6V
Recording times vs quality:	30 frames/sec	2 hrs
	15 frames/sec	4 hrs
Recording times vs Battery type:	Alkaline AAA	2 Hrs
	Lithium AAA	4 hrs

Recording Software

SUPER THIN VIDEO AUDIO RECORDER

The Digital Video-Audio Recorder is an ultra miniaturized, solid state, standalone device, which can be utilized for remote video and audio logging and can be covertly installed.

The unit's small metallic enclosure and totally silent operation make it suitable for most covert activities where stealth and long-term reliability is the key to success.

The unit can record stereo audio and color or black and white video from 1 to 15 frames per second, and image sizes up to 640x480 pixels utilizing a standard composite video camera input.

The digital recorder will record up to 4 hours of color video and may be expanded by adding up to eight more memory cards.

Recorded date may be transferred, viewed, edited and archived on a standard PC.

SYSTEM FEATURES

- Dual Camera audio/video recorder
- Shipped with 2 very low light color cameras
- Data archived via USB bus to DVD or CD
- View & create analog copies from your PC
- Connects to Wireless Remote Interface System
- Ultra thin design for more covert concealment
- 4 hrs of color VGA video and Audio, 30FPS
- Optional 4hr/30FPS memory cards
- Shirt button and pin-hole camera included

SPECIFICATIONS

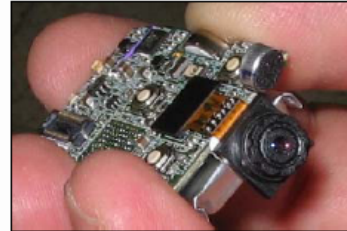| Size:		4.82 x 3.81 x 7.62 cm
Weight:		56 g
Operating Voltage:		2.6V – 3.7V
Recording times vs quality:	30 frames/sec	4 hrs
	15 frames/sec	8 hrs
Recording times vs Battery type:	Flat Lithium Battery	4-8 Hrs

Flat Lithium Rechargeable Battery

connector

1.1. Wireless Remote Interface System

The WRIS is an option for both the TSE 5608 & 5609 recorders that enables the user to see and hear everything live that the recorder captures. The user can be up to 1.500 feet away from the recorder monitoring the action via a laptop connected to a portable high gain antenna.

1.2. Live Monitoring Covert Option

The PWRIS is the covert package of the WRIS. Instead of monitoring the data with a laptop and high gain antenna, watch it live on a pocket PC. Be up to 600 feet away from the bad guys, while viewing and playing back the recording from the TSE 5608 or 5609

1.3. RF on/Off Switch

Remote ON/OFF switch for use with any recorder.

1.4. IR Motion Detector

Small Infrared Sensor Turns ON Recorder when motion is detected within a range of 30 feet. Multiple units can be joined together for longer/wider operating range. Ideal for situations in which the unit must be securely hidden before the time of recording. Runs on internal CR-2032 coin cell for 100 hours, or can be used with external power for longer use.

1.5. Officer Safety Transmitter

The most cost effective way to monitor live audio during an operation, optional for all our recorders, real-time audio monitoring via handheld radio with a range of up to 1.200 feet.

1.6. Secure Digital Link

Each recorder has a built-in digital transceiver. Can monitor live audio/video via Pocket PC for officer safety; user settings for optimal range of battery usage; ideal for "Buried" audio and video applications; playback audio while recording new data. Transmitter does not increase size of recorder.

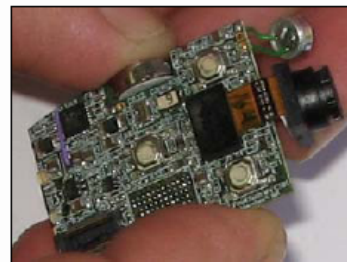# CONCEALED CAMERA VIDEO/AUDIO RECORDER IN A KEY RING

TSE 5610

The 5610 series is the latest design in concealed surveillance technology. It combines micro-electronics built on an ultra thin form factor with a camera/microphone and digital audio mpeg-4 recorder, all housed in a Car Key FOB allowing inconspicuous evidence recording. The 5610 can be used for digital still images for or up to 90 minutes of video, audio recording in highly transportable packages. Data is transferred to any PC via a Universal Serial Bus (USB). Standard audio hardware commonly found on most PCs may be used for data playback. The 5610 can be used in varied applications from making still shots of documents/targets to recording room conversation both audio and video.

SYSTEM FEATURES:

- Ultimate concealment
- Still shots features
- Audio/Video recording selection
- 90 minutes video recording
- Integrated camera/microphones/recorder

SPECIFICATIONS

Camera Module:	1/2.7" CMOS
Digital Still Image:	Resolution: 2 Mega pixels (1,600x1,200)
	Compression: JPEG
Video:	Concurrent audio and video recording
	Resolution: QVGA
	Compression: MPEG4
	Frame Rate: 15-24 fps
Audio:	Sampling rate: 8KHz
	Compression: AMR, 12.2 kbps
	Digital AGC
Memory:	Built in Flash: 256MB
Power:	Battery: Li-Polymer
	Rechargeable: USB
User Interface:	Video & Audio Recording : 'Start'/'Stop'
	Audio Recording: 'Start'/'Stop'
	Still Picture: 'Shoot'
	Action Indication: By a short vibration
Operation:	Video Recording Time: 90 minutes
PC Interface:	USB
Module Size (Battery included):	Without the CMOS : 35.5x26x11 mm
	With the CMOS : 46.5x26x11 mm

BODYWORN DIGITAL   VIDEO AUDIO RECORDER   TSE 5601

INTRODUCTION

With 4GB flash memory this body-worn robust digital recorder provides 25 images per second and stereo audio recording. The recordings are stored on an internal flash memory and are powered from internal re-chargeable batteries.

PRODUCT FEATURES

- Ultra Small Size and Robust
- 1 Video and 2 Audio Inputs
- 25 images/second
- Records via the unit Toggle Switch or External Trigger
- LEDs For Power, Battery, Charging and Memory
- Rechargeable Battery and 4GB Compact Flash (supplied installed)
- USB download to optional laptop
- Button camera color

SPECIFICATIONS

Activation	Manual switch, external triggers or timer
Media	4GB compact flash, supplied installed
Recording Duration	Typ. 2 hours
Power On Until Recording	<1 sec

Video Recording

Rate	25ips PAL, 30ips NTSC
TVL	540
Pixels	720 x 288 PAL; 720 x 240 NTSC
Format	MPEG - full image update
Input Signal	1 input; composite video 1V p/p; color/mono; PAL/NTSC
Embedded Text	Date/time plus 12 user-defined characters

Audio Recording

Type	Mono or stereo
Inputs	2 Mic level inputs 3V phantom powered (compatible with most condenser mics)

Connectors/Controls/Indicators

Toggle Switch	Off (USB2 to PC), On (record)
USB2/Control	Fischer 102 series 7 way (keyed); USB2 on
Camera Power	5V, 6V, 9V or 12V (menu selectable) supplied by the unit (max. 2W)

PORTABLE VIDEO/AUDIO RECORDER | TSE 5602

INTRODUCTION

This handheld compact recorder with integrated monitor has 4 video input channels to enable multiple recording and quad displays on the monitor. Using mpeg4 technology and PAL/NTSC format this product is extremely multipurpose for room or other observations.

FEATURES

- High Quality Real-time Display - Max. 120fps(NTSC) 100fps(PAL)
- High Quality and High Speed Recording - Max. 120fps (NTSC) 100 (PAL)
- Various Resolutions on Display and Recording - 704×480, 704×240, 352×240(NTSC), 704×576, 704×288, 352×288 (PAL)
- MPEG4 compression
- 1, 4 Division - Watchdog Function
- Remote Observation Through Network
- Emergency Screen Auto Transfer to Center Software

SPECIFICATIONS

Display	Speed	NTSC : 120fps PAL : 100fps
	Screen Division	1, 4 Division
Recording	Max. Speed (@ CIF)	NTSC : 120fps PAL : 100fps
Video	Resolution	NTSC : 704×480, 704×240, 352×240
		PAL : 704×576, 704×288, 352×288
	Recording Option	Continuous, Motion, Sensor and Pre-Alarm
	Format	NTSC/PAL
	CODEC	MPEG4
	Input	4ch
	Output	7" Wide LCD (800×480), CVBS 1 Port (Quad)
Audio	Input	1ch (line input)
	Output	1ch
	CODEC	ADPCM
Alarm	Input	2 Ports
	Output	2 Ports
Network	Transmission	Ethernet (RJ45)
	Protocol	TCP/IP (support dynamic IP)
Backup	Device	USB, Network
Other Functions	Remote Control	Remote Software (CMS)
	Remote Alarm	E-mail, CMS report
	PTZ	RS232C/485
	W/D Function	Yes
	Image Authentication	Watermark
	Language	10 Languages
	Password	Multi-Level User Password Authorization
	USB	1 Port (USB2.0)
Working Temperature		0 ~ +40
Power Source		AC 12V, 50/60Hz (Adaptor included)
Dimensions		186mm(W) × 60mm(H) × 265mm(D)
Weight (net)		1.5Kg (5.94lbs)

CONCEALED BODY-WORN VIDEO/AUDIO RECORDER — TSE 5603

The latest in body-worn miniature solid state video & audio recorder designed for concealed recording. The TSE 5603 unit is very compact - smaller than a notebook and will fit into a coat pocket. Operation is silent & vibration less, low-radiation and fail-safe. Operation can be via remote control – handy if the unit is concealed on a person. The unit can record in either TV (high) quality or long-play mode.

FEATURES INCLUDE:

Rechargeable & removable built-in battery pack – 700mAh or 1400mAh options available (can also supply 5V CCD camera power); currently up to 4GB compact flash memory allowing over 4 hours recording time (unit comes with 1GB card = up to 110 minutes recording time); MPEG-2 compression TV Image Rate & Resolution; 2 built-in mic amps for Stereo Audio Quality; Video can be read by USB Interface or CF unit.

This unit has been designed with police, military and other law enforcement agencies in mind, but is also very useful in any other application where undetected surveillance is required.

SPECIFICATIONS

Video	Pal/NTSC with complete TV resolution and 25 to 30 frames/second
Resolution	Resolution PAL NTSC D1 720 x 576 720 x 480 2/3 D1 480 x 576 480 x 480 ½ D 352 x 576 352 x 480 SIF 352 x 288 352 x 240
Audio	Microphone input (stereo)
Encoding	MPEG-2 MP@ML for video and MPEG-1 layer 2 for audio, additional encoding
Storage medium	Compact flash memory card type 1 or 2
Power supply	Lithium ion battery pack with 700mAh for 75min. (typ.); or 1.400 mAh for 150 min. (typ.); or permanent power supply via battery adapter
Interfaces	USB interface (slave) up to 12MBit/s, audio/video input, remote control
Camera power supply	5V/ ≤ 200mA
Status display	LEDs Operating mode/system error; battery status; storage status; LED's can be turned off
Temperature range	0°C to 50°C
Dimensions	130 x 80 x 22 mm

SCOPE OF DELIVERY

- Interchangeable and rechargeable battery pack for up to 1.5 hours of recording length
- External battery charger (Standard JVC AA-V100) with battery adapter for permanent power supply
- PC software for the configuration of unit, as well as for video decoding/verification, for playback and for export of videos via USB
- Standard compact flash memory card (1 GB) for up to 100 110 minutes of recording length
- USB cable

VEHICLE RECORDER & MONITOR UNIT

Digital Video Recorder and Product Family

PRODUCT FEATURES

- Small size, low power consumption
- 4 or 16 video inputs and 2 audio inputs
- Proprietary mpeg format
- 25 images/second
- 4 levels of resolution
- Removable hard disk cartridges up to 120Gb
- GPS/GSM
- LAN/WLAN/automatic download
- RS232 control
- Normal, alarm, timer or stills recording
- Motion activation recording
- Vehicle brake/indicator monitoring
- 2 live view video switcher outputs
- Watermarked images
- Password protection
- Intuitive controls
- Flexible menu system with help screens
- Rapid search of recordings
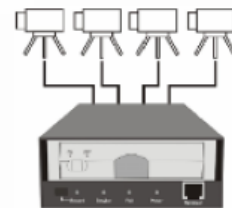- 3 Year warranty

USING THE SYSTEM

The Digital Video Recorder is used with a removable Hard Disk Cartridge to record from multiple video and audio sources.

The Reviewer is used for on-site reviewing of video/audio recordings and to configure the optional menu settings of the Digital Video Recorder.

The removable Hard Disk Cartridge is connected to a PC (via USB Kit) to analyze, copy or archive video/audio recordings and to download new operating software.

A Wireless Local Area Network (WLAN) system can be used to download recordings from the unit in a vehicle to a PC.
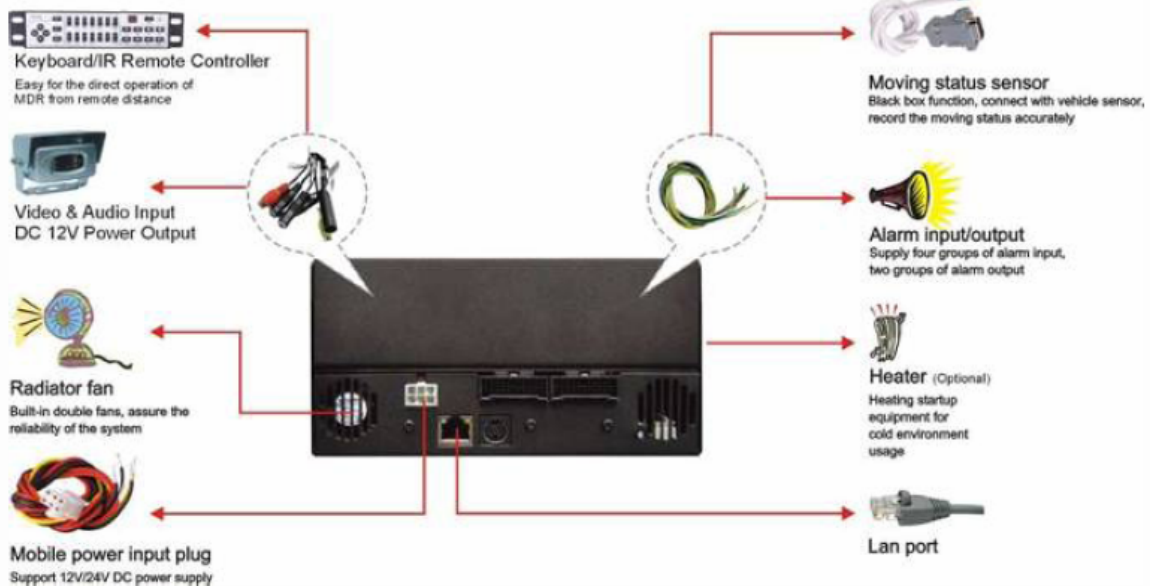
VEHICLE RECORDER & MONITOR UNIT

SPECIFICATIONS

Video Recording	
Max Rate	25ips PAL, 30ips NTSC, shared; selectable by camera
Resolution	Low, Medium, High, V.High
TVL	540
Pixels	720 x 288 PAL; 720 x 240 NTSC
Format	MPEG - full image update or optional conditional refresh
Input Signal	4 or 16 inputs; composite video 1V p/p; color/mono; PAL/NTSC auto-switching
Simultaneous Functions	Record, Playback, Live views, Ethernet
Recording Medium	2.5" IDE PC-compatible hard disk in customized cartridge
Recording Modes	Normal, timer, alarm, single/multi shot, loop or single pass
Alarm Recordings	Post-trigger recording; show alarmed cameras live on video switcher, pre-trigger write protection of existing recordings
Timer Recording	Weekly timer (7 day programmable) or interval timer, or both
Motion Activation	User configurable for cameras, areas and sensitivity
Embedded Text	Camera number, date and time plus 12 user characters for each camera; GPS* speed and position
Camera Focus Mode	External indication of relative camera focus
Audio recording	
Type	Mono or Stereo
Connections	2 line inputs; 2 line outputs
Sampling Rate	16kHz/8kHz
Sampling Res.	16 bits/8 bits
Max Level	Selectable: 0.12V to 2V RMS (0.35V to 5.6V pk-pk)
General	
Security	Proprietary files; password protection; fragile watermark every image (MD5+DES); embedded camera text
Power [DC]	12V DC nominal (8V-13V DC max range);
External PSU Specification	Output: 12V DC Regulated, 2A (Continuous) 3A (Peak)
Power Recording	0.60A, 12V (7.2W)
Power Not Recording	0.48A, 12V (5.8W)
Peak Current	2.8A peak start-up current @ 12V (X201 connected)
Power on Until Recording	< 5 seconds
Clock	TCXO (+/- 1 min/year); optional GPS locked clock*
Case	Mild steel, grey painted
Dimensions (mm)	210 x 112 x 47 (case)
Dimensions (mm)	220 x 116 x 52 (overall)
Weight	965g (without cartridge)
Environment	Indoor use
Operating Temp. Range	+5C to + 40C, 20% to 80% RH Storage
Temp. Range	-40C to +65C
Mounting	Free-standing or screw-mounted

RUGGED PORTABLE DVR RECORDER

FEATURES

- Standalone real-time operation system - VXworks
- Pure hardware MPEG4 compression
- Specially designed anti-vibration and shock: 10G grade shock tests
- Unique surveillance function while reversing the vehicle
- Easy to operate 3D User Graphical Interface
- Internal HDD bracing: supports 2.5" & 3.5" HDD, supports 2nd HDD
- Wide power supply 10-30V DC (40 ~ 80V DC optional)
- Remote IR control & extended panic button for driver
- Vehicle sensor function (Black Box)
  - Speed
  - Brakes
  - Stop
  - Reverse
  - L/R Blinkers
  - Auxiliary
- Entertainment Programs
- RS485 for PTZ function
- 10M/100M network function, simple monitoring configuration
- Two-way network voice communication
- USB 2.0 x2 for backup
- GPS function OPTION
- Shut down delay recording function

Keyboard/IR Remote Controller
Easy for the direct operation of MDR from remote distance

Video & Audio Input
DC 12V Power Output

Radiator fan
Built-in double fans, assure the reliability of the system

Mobile power input plug
Support 12V/24V DC power supply

Moving status sensor
Black box function, connect with vehicle sensor, record the moving status accurately

Alarm input/output
Supply four groups of alarm input, two groups of alarm output

Heater (Optional)
Heating startup equipment for cold environment usage

Lan port

SPECIFICATION

Video Input	2/4 Channel BNC Video Input, B/W & Color Compatible
Audio Input	2 Channel BNC Audio input
Video Output	PAL/ NTSC 1.0Vp-p 75Ω,1 Channel BNC Video Output
Audio Output	1 Channel Audio Output
Audio/Video Compression Format	Pure Hardware MPEG-4
Display Mode	Full Screen, 4-Channel
Record Resolution	2-Channel: Half D1/ch; DVD Image Quality 4-Channel: CIF/Ch; DVD image quality
Record Frame Rate	25 f/s/Ch(Pal)
Record	Max.:25f/s/Channel PAL Frame Rate Adjustable
Alarm Input	4 Channel Alarm Signal Input
Alarm Output	2 Channel Relay Output (N.O or N.C)
Picture Quality	5 level Standard Image Quality and 3 Level User-Defined Image Quality Optional
Record Mode	Manual, Continuous, Schedule, Event, Motion Detection and Pre-event Recording
Motion Detection	Each Channel up to 192 Detection Zone Sensitivity, Adjustable
Function	Unique surveillance function while reversing, the vehicle; Shut down delay (0-60 Min. adjustable) recording function, Network Timing Protocol (NTP) and DST function, Watermark function (Information such as time, date, channel No. etc.), License plate and travel Path display and recording
Network Interface	10/100 M RJ45 TCP/IP Protocol, IE Brower supported
Backup Function	Backup through USB2.0 high speed data interface Backup through Network 3), HDD Backup Master-Slave, HDD data backup, recording data on the HDD can be played directly through PC
Control Function	IR Remote controller or wired keypad (optional)
Camera Power	12VDC/1.5A for Connected Camera
Mobile Entertainment	Yes
GPS Function	GPS Function (Optional)
Wireless Communication	GPRS Function (Optional)
	802.11 Wireless Network Transmission (Optional)
Mechanical Configuration	Shock Resistant Structure of Rack
	Shock Resistant Structure of HDD Brace
Power Supply	10 ~ 40VDC
Power Consumption	25W MAX
Temperature	Work Temperature -30 ~-+50 Humidity < 90%
Dimension	190 W × 90 H × 295 D mm
Weight	~8Kg

DIGITAL DVR VIDEO/AUDIO RECORDING SYSTEM   TSE 5612

FEATURE

- Triplex Function: Live/Record/Network
- 16 video looping
- Records maximum 100fps (Real-time record/playback)
- Provides Channel Masking
- Remote Viewing Via TCP/IP:Live/Play/Backup(live/playback (.DVR or AVI)
- Supports Multi Languages (English, Traditional Chinese, Japanese, French)
- Alarm: Input x4/Output x1 (NC,NO)
- Audio: Input x1/Output x1
- Alarm/Motion/Vloss/HDD Full/HDD Crash
- Data backup: USB interface/Network/CDRW
- Hard disk data readable in PC (Video Viewer AP)
- VGA Output (Optional)

SPECIFICATIONS

Model	MJPEG-16
Channel	16-CH
Input	16-CH Inputs 1.0Vp-p, 75ohm unbalanced (BNC Type)
Output	S-Video x 1 / VGA x 1 (Optional)
Horizontal Resolution	720 x 480 (NTSC) / 720 x 576 (PAL)
S/N Ratio	More than 40dB
Color	16.7 Million
Monitoring Method	
Split Screen	1,4,9 (Live / Playback)
Zoom	Live & PB Available, 2 x 2 zoom
Sequence	Available
	720(H) x 576(V) Active Pixels (PAL)
Screen Quality	1/4 Screen: 360(H) x 288(V) Active Pixels (PAL)
Display Rate	120 frames per second (4x30)
Recording/ Play Function	
1/30(1/30), 1/15(1/15), 1/10(1/10), 1/5(1/5), 1/3(1/3), 1/2(1/2), 1(1), 2(2),	
Recording (Max) NTSC	3(3.13), 5(5), 10(8.33), 15(12.5), 30(25), 60(50), 120(100).
Record Quality	Super, High, Fine, Normal, Low
Compressed Picture	M-JPEG
REC. Mode	Normal, Schedule, Motion-detect, Alarm
Playback Mode	Date / Time search or event search
Mechanical	
Power Supply	DC 12V / 5A
Weight	N.W./ G.W.: 6.2g / 9.1kg
Dimension	430 (W) x 444 (D) x 100 (H)mm
Operating Temperature	41 ºF~104 ºF (5 ºC~+40 ºC)
Operating Humidity	Less than 90%

PORTABLE HARD DISK RECORDER

TSE 5613

Ruggedized digital video recording and transmission system for mobile applications with 4 or 10 video inputs

- Long-term recording onto removable hard disk drive with adaptive multi-track management for schedule-controlled permanent recording, or video motion and contact-triggered event recording respectively

- Suitable for public and private transport vehicles and compatible with remote monitoring centers

- Compatible to monitoring centers

- Integrated Multi-Unicast server supporting multiple network and dial-up connections simultaneously

- Integrated Web Server for up to 4 IP-connections, enabling video transmission and camera control on a PC/Handheld using standard Web browser

- Manual or event-triggered connection for live video transmission to remote monitoring centers

- Multi-criteria evaluation of recordings with synchronous image forward and reverse playback and graphical analysis with direct image access

- Extensive image export functions for single images and video sequences including image authentication tool

- Up to 5 privacy zones per camera, configurable for live images or live and recorded images

- Removable hard disk drive for offline evaluation via PC compatible USB adapter kit

- Extended power supply range and integrated voltage transformer for all cameras

- Compact design, suitable for surface, flush and ceiling mounting

- Vibration Approval EN 50155 and "e-mark" (EMC in vehicles)

Specifications	
Operating system/system design	Embedded Linux/dedicated hardware
Logging	Transmitter-side event logging of essential basic functionalities and device status
Power supply input	8 to 40 V DC
Power supply output	12 V DC for 4/10 cameras, max. power consumption 350 mA per camera
Current consumption	Typical 10 W without vehicle cameras
Ambient temperature	+5°C...+50°C/+41...+122°F
Housing/Enclosure	Horizontal mounting: 221 x 88 x 300 mm (WxHxD)
Weight	4 kg with hard disks
Options	Removable hard disks, PC Kit CamDisc USB, PC Kit CamDisc, dial-up adapters, CamMount Kit

PORTABLE ROOM MONITORING VIDEO/AUDIO KIT

Sony Digital Video Walkman GV-D800E

AC Power Adaptor

Sony Remote Box: LANC, CAM, PIR, Mic, Video Out

I.e. CCD Colour Pinhole Camera

Battery Pack 12 V, 8 x AAA Alkaline

Digital8 Recording Tapes

Cable Set with PIR Motion Sensor

This Automatic Room Recording Kit is ideal for combined event-triggered video and audio monitoring and includes the following items:

- Sony Digital Video Walkman GV-D800E
- ·AC Power Adaptor
- ·Sony Remote Box: LANC, CAM, PIR, Mic, Video Out
- CCD Color Pinhole Camera (as an example)
- Cable Set
- PIR Motion Sensor
- Digital8 Recording Tapes
- Battery Pack 12 V, 8 x AAA Alkaline

Optionally available:

- Wireless PIR motion sensor (to be used for example for outside surveillance from a vehicle

Example: If a rearview mirror cam is used, the wired PIR motion sensor can be replaced by a wireless version placed outside the car. In this case a receiver can be integrated in the Sony Remote Box that switches on the cam and starts the digital VCR.

INTERROGATION ROOM KIT

INTERVIEW ROOM MONITORING SYSTEM

It is necessary to monitor interviews of suspects during an interrogation to obtain vital evidence. Often during an interview the interviewing officer is totally involved with the questions and answers that sometimes small vital clues to an investigation are missed.

The TSE cell monitoring system allows the backup team to monitor the interview using covert CCTV cameras and audio microphones. It is also possible to send questions to the interviewing officer by covert radio.

A typical system is comprised of the following components:

CCTV

Qty 2 Pan Tilt Zoom Color cameras concealed in a Non-Smoking sign, or the like, focusing on the suspect from behind the interviewing officer
Qty 2 Camera controllers
Qty 2 Color LCD monitors
Qty 2 Video Cassette Recorders

AUDIO

Qty 2 High sensitivity electrets microphones
Qty 2 Microphone & headphone amplifiers
Qty 4 Headphones
Qty 2 Active loud speakers
Qty 1 Stereo audio cassette recorders
Qty 1 Audio patch panel to allow sound to record on video recorder
Qty 1 Audio enhance unit to improve the quality of low speech or audio
Optional-Audio filtration system in rack with 4 recorders and audio patch panel i.e. all in one system

COMMUNICATIONS

Qty 1 UHF wireless earpiece for the interrogator to receive instructions
Qty 1 UHF Transceiver Radio with desk microphone & loudspeaker

ROOM FITTING

Flooring – heavy duty rubber floor covering
Walls & ceiling – Acoustic tiles
Lighting – Lighting moved from room centre to sides to allow for better video pictures
Table – Fixed to the floor, light color to reflect light back up on the suspects face
Chairs – Suspect's chair to be fixed to the floor, officer's chair to be normal
Lighting Switches – Fitted outside the room
No internal power sockets, all must be removed
Air conditioning – Special Low Noise version with direct access to exterior wall

Installation normally takes two technicians 5-10 days, depending on the number and sizes of rooms in which to install the system and train the officers in the use and daily maintenance of the system.
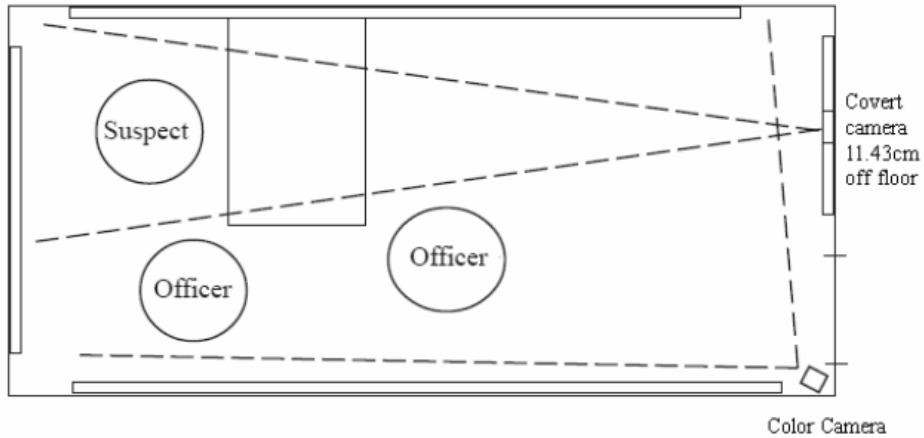
As an optional system, TSE can provide a portable Interview Monitoring System for cases where investigation interviews are carried out outside of the fixed HQ.

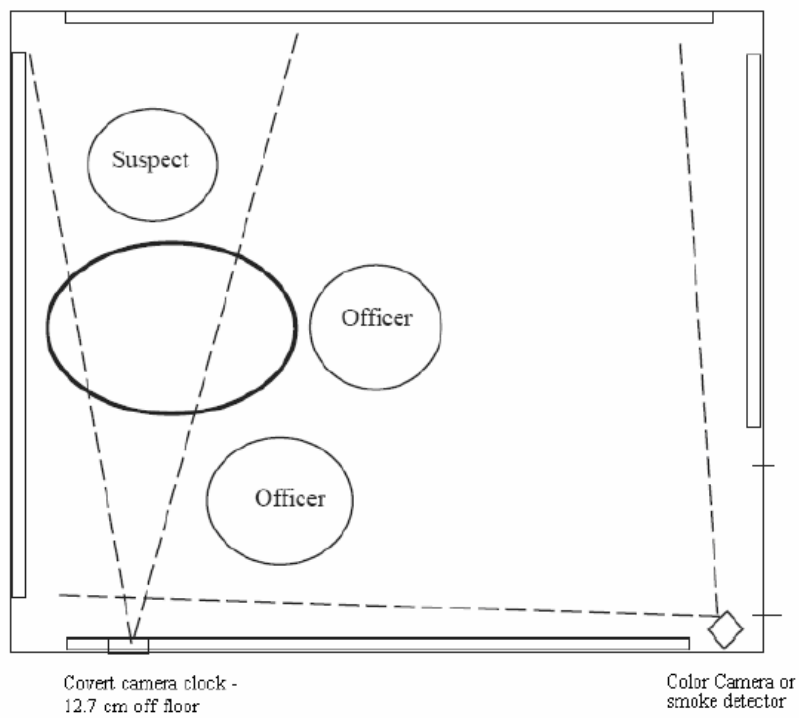## SAMPLES OF A TYPICAL INTERROGATION ROOM LAYOUT

Two Camera System

Suspect

Officer

Officer

Covert camera 11.43cm off floor

Color Camera

Two Camera System

Suspect

Officer

Officer

Covert camera clock - 12.7 cm off floor

Color Camera or smoke detector

If you would like further Information about ELAMAN,
or would like to discuss a specific requirement or project, please contact us at:

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