

# VIDEO AND NIGHT VISION SYSTEMS



PKI ELECTRONIC INTELLIGENCE GmbH GERMANY

**PKI 5100**

## Multi-Purpose Thermal Imager

The **PKI 5100** is an innovative thermal imager, which offers outstanding imaging and temperature measurement performance together with extreme flexibility, ease of use and minimal operating cost. With the **PKI 5100** we can offer an imager that is ideal for thermography and maintenance engineer alike; high quality images may be captured and manipulated offline or problems can be resolved on the spot. The camera comes with an industry leading 3.5" colour LCD display with LED backlight. The ergonomically designed imager houses the complete uncooled microbolometer-based camera core together with a long life Li-Ion battery pack. Images can be stored on MMC or SD cards for recall and further analysis if required and also can be downloaded to a PC for further report generation and printing.

### Operation

Designed for self-contained use, the **PKI 5100** contains everything required by the operator. The high power, field replaceable, rechargeable Li-Ion battery allows continuous operation over a full working shift. The **PKI 5100** is fully radiometric. Temperature measurements can be made over the entire image, and hot spots can be identified by the use of a trigger activated laser pointer.

### Specifications:

- Field of view: 20° x 15°
- Focus: manual
- Minimum Focus approx. 30 cm
- Spectral response: 8µm to 14 µm
- Thermal sensitivity: 150 mK (0.15°C) @ 25°C scene temperature
- Detector: 160 x 120 pixels uncooled microbolometer
- Image storage: up to 1000 images on supplied SD card
- Display:



3.5" colour LCD with LED backlight  
4 colour palettes

- Laser pointer: a built-in class 2 laser is supplied to highlight the central measurement area
- Measurement temperature: range - 10°C to +250°C
- Radiometry: two movable temperature measurement cursors  
Temperature difference measurement
- Emissivity Correction: user selectable 0.2 to 1.0 in steps of 0.01 with reflected ambient temperature compensation
- Accuracy the greater of plus/minus: 2°C or 2%
- Power supply: Li-Ion rechargeable

battery, AC adaptor supplied

- Operation time: 4 hours continuous operation
- Operating temperature: -15°C to + 45°C
- Storage temperature: -20°C to + 70°C
- Dimensions: 230 x 120 x 110 mm
- Weight: 0.75 kg incl. battery
- Predictive and preventative maintenance
- Process monitoring
- HVAC & R troubleshooting
- General industrial/domestic inspection
- Security

**PKI 5105**

## Thermal Imaging Camera

Compared with night vision devices, the advantage of thermal imaging cameras is that they are able to capture images even through fog, smoke or rain. Animals, objects or persons become visible even hidden behind shrubs or bushes. Of course it shows a thermal image, not a natural image. The **PKI 5105** can be used for surveillance operations of any kind, as well as for thermographic controls at insulation works in buildings or at leakages.

### Specifications:

- Spectral range: 7-14 µm
- Type of detector: uncooled silicone micobolometer
- Focusing: 1 m to infinite
- Power supply: standard batteries
- Operation temperature: -20° to +50°
- Weight: approx. 600 g
- Housing: waterproof
- Camera: 2.3 mega pixel
- IR-resolution: 140 x 140 picture elements
- Display of the camera: 3.5"



### PKI 5110

## Laser Range Finder

Measuring the distance to a possible target always is essential in cases where an unobtrusive alignment to this is necessary in order to choose one of the specific listening devices like our Laser Monitoring Device **PKI 3100** or our Infrared Observation System **PKI 3200**. Any special task forces, may it be from police or military departments, should have the **PKI 5110** as an essential tool for their purposes. This hand held and low-weight unit perfectly matches to these requirements and is as easy to handle like an ordinary binocular. By looking through the device you can obtain the right direction (in case of the use of one of a.m. devices or directional antennas for wireless monitoring and/or any other listening devices) and by pushing a button, automatically and within a second the right distance to the object will be digitally displayed. The binocular is equipped

with transmitter- receiver and allows measurements up to 10 km distance. The unit exactly measures the distance and angle and the results are shown on the integrated LCD indicator. The reported measurements will help to choose the right objective for optical observation systems and the right angle for directional microphones or antennas.

#### Specifications:

- Field of view:  
8° = 140 m width at 1.000 m distance
- Eye relief: 13.5 mm
- Exit pupil: 3.6 mm
- Weight: approx. 425 g
- Dimensions: 6 x 14,5 x 14,2 cm



### PKI 5115

## IR and Laser Detection Device

There is a counter-device for every unit. This pocket device offers very good services. Night observation by camera or night vision instruments with IR light can be easily detected. Furthermore, even laser interception devices with strong beam within the invisible 880 nm range can quickly be located. You simply have to put the unit with its sensor into the direction where you suspect an observation device. If the IR-beam meets the sensor a visual and/or acoustic alarm will be heard. Its distance can be evaluated according to the alarm, which is strong at short distances and weaker at longer distances.

#### Specifications:

- Wave length: 780 – 880 nm range
- Dimensions: 110 x 58 x 24 mm
- Weight: 120 g
- Power supply: Li-ion battery  
Comes with recharger



### PKI 5120

## Zoom Rifle Scope 3-12 x 50

We are prepared to offer rifle scopes in multiple versions. Please ask for a quotation.

**PKI 5120** is bullet-proof also against large calibres and features unparalleled light transmission with fully tempered optics. It is filled with nitrogen against internal moisture. **PKI 5120** is equipped with a Duplex reticle providing a cross hair with thin and thick crossing lines for precision aiming. Thick bars on the perimeter and thin ones in the middle allow the eye to quickly locate the center of the reticle and the thin lines in the center allow for precise aiming. Our valuable Duplex reticle offers a high hit ratio even at long distances.

#### Specifications:

- Magnification: 2-12 x
- Objective lens diameter: 50 mm
- Tube diameter: 25,4 mm
- Reticle: Duplex 30/30
- Eye relief: 75 and 95 mm
- Dimensions: 314 x 58 x 58 mm
- Weight: 390 g
- Installation: suitable for diameter 25,4 mm, included in package



**PKI 5130****Waterproof CCD Colour Camera**

The **PKI 5130** offers clearer images and greater distances of video observation to every government department or industries. The built-in 1/3" SHARP image sensor provides pinsharp pictures at a very high resolution. Even under no light conditions this camera works perfectly because of the integrated IR illumination. Both, the camera and the IR-illumination, are placed in a waterproof housing for outdoor use under every weather-condition. The invisible IR-light illuminates the surrounding up to 50 m distance. Depending on buyer's option the **PKI 5130** is available either in PAL or NTSC version.

**Specifications:**

- Image sensor: 1/3" SHARP sensor
- TV system: PAL / NTSC
- Horizontal resolution: 480 TV-lines

- Pixels: PAL – 752(H)x582(V)  
NTSC – 768 (H) x 494 (V)
- IR LED: 5 x 36 pcs
- IR Series Distance: 20 to 50 m
- Synchronisation System:  
Internal synchronisation
- Minimum Illumination:  
0.000 lux / F1.2 (LED on)
- S/N ratio: > 48 dB (AGC off)
- Gamma characteristic: 0.45
- Video output: 1 Vpp at 75 Ohms
- Scanning system:  
PAL – 625 lines/50Hz  
NTSC – 525 lines/60Hz
- Electronic shutter time:  
automatic,



PAL 1/50-1/100.000 sec,  
NTSC 1/60 –1/100.000 sec

- White Balance: automatic
- Operating temperature:  
-10 to + 50°C, at 95% relative humidity
- Storage temperature:  
-20 to + 60°C, at 95 % relative humidity
- Power supply: 12 VDC, 500 mA

**PKI 5200****Nightvision and Thermal Imaging System**

The **PKI 5200** is an easy to use, handheld device for direct observations by means of an uncooled thermal imaging system. It provides "round-the-clock" observation, monitoring and security for any military, paramilitary, police or civilian application. Not only problematic areas like border fences, buildings and industrial sites can be surveyed but also hidden objects in cars, cases etc. It also detects human traces like foot- and fingerprints as well as overheating and fires, before flames and smoke become visible. This makes it the ideal, costeffective, warning device for any monitoring task.

**PKI 5200** is an integrated electro- optical system incorporating a microbolometric IR camera for night-vision and a CCD camera for daylight use into a highly affordable unit for monitoring any sensitive location or observing potential trouble spots. **PKI 5200** can be fixed to a solid base at a particular observation point and being connected via optical fiber or wireless link for remote display and centralized control by the operator situated at a safe distance. Vehicle mounting for mobile reconnaissance also is possible.

**Specifications:****A) Thermal Imaging part**

- Detector type FPA (Focal Plane Array) uncooled microbolometer (amorphous silicon or vanadium oxide)
- Spectral range 8 – 12 µm
- Resolution 320 x 240 pixels
- Focal length 100 mm
- F# 1
- Field of view 8.45°H x 6.33° V
- Video output CCIR or RS 170
- Remote control RS 422 or RS 232

- Control operation AGC, focus (manual) contrast, on/off, video polarity, NUC
- Operating voltage 12 V nominal
- NETD < 100° mK
- Detection range (human being) better than 800 m
- Recognition range (human being) better than 300 m
- Transmission (hard carbon exterior coating) 81 % (8-12 µm average)

**B) Video camera part**

- Sensor CCD
- Pixels 768 x 494
- Optics F 1.4 / 50 mm
- Field of view 5.6° H x 4.2° V
- Detection range better than 2.500 m
- Recognition range better than 1.000 m
- Modular options optimised to applications
- Remotely controlled
- Easy installation
- Built-in "Go/No Go" Tester



## PKI 5205

### Binocular Telescope Camera

This high-class pocket camera is a development from the latest generation of camera. It offers a 10x magnification with the dimensions of only 140x100x40mm and a weight of 396g, integrated digital camera with 1,3 megapixels and 16MB memory capacity. This allows you to observe objects or persons at a distance of up to 1000m and save as much pictures as you want on the provided smart card. The fitting for a tripod is also included. The pictures can be transferred to a PC by means of the USB output. Because of its small size we recommend to take the **PKI 5205** always with you in case of surveillance or observation services.

#### Specifications:

##### A.) Digital Camera

- Image Sensor: 1,3 mega pixels CMOS sensor
- Resolution: 1280 x 1024 CSXGA,

- 640x480 (VGA)
- Quantity of pictures: SXGA / 50 pictures  
VGA / 90 pictures
- Memory Capacity: 16 MB
- Lens: F 4.5
- Angle of view: 5,8°
- Focusing range: > 7 m
- Exposure white balance: Automatic
- Port: USB
- Self-timer delay: 10 seconds
- Power of keeping: 25 seconds
- Battery: AAA (2 pcs.)

##### B.) Binocular

- Magnification: 10 x 25
- Object Lens Diameter: 225 mm
- Angle of view: 5.8°
- Exit pupil diameter: 2,5 mm
- Exit pupil distance: 10 mm



## PKI 5210

## PKI 5220

### Nightvision Monocular, Nightvision Binocular

Whenever visual observations under low-light or even no-light conditions have to be effected, the use of a professional night vision device is indispensable. With these two units, whether monocular or binocular, such tasks can easily be fulfilled. These extremely lightweight but robust night vision devices have been designed for operation under all weather conditions and at any light level. Even in complete darkness these units will work due to the built-in IR-illuminator being invisible to the human eyes. Each type, whether the **PKI 5210** or the **PKI 5220** provide a sharp and clear picture of the area to be surveyed and is therefore especially useful for police, customs, security guards and border controls. Each type is waterproof and another main advantage is the low power consumption which allows an outstanding operating time of approx. 50 hours continuously with one set of standard batteries. Different adapters optionally can be supplied to connect the **PKI 5210 / PKI 5220** to cameras or camcorders

#### Specifications:

- Controls Multi-latching push-button:
  - On/Off
  - Intensifier only
  - Intensifier plus IR-Illuminator

- Eyepiece: Adjustable diopter

- Magnification: 1 x with 25mm lens or adaptor for 75 mm Lens

- Power supply: Standard Alkaline batteries, type AAA

- Waterproof: according to IP 67

- Ambient temperature: - 50°C to +60°C

- MTBF: 10.000 operating hours

- Size:

**PKI 5210** – approx. 190 x 60 mm

**PKI 5220** – approx. 140 x 125 mm

- Weight:

**PKI 5210** – approx. 350 g

**PKI 5220** – approx. 900 g

- Available with 2nd, 2nd+ and 3rd Gen. tubes

- Waterproof according to IP 67

- Provides all weather operation

- Accepts standard C-mount lenses

- Operates from standard batteries

- More than 50 hours battery lifetime

- Built-in near IR-illuminator

- Available with 2nd, 2nd+ and 3rd Gen. tubes

- Waterproof according to IP 67

- Provides all weather operation

- Accepts standard C-mount lenses

- Operates from standard batteries

- More than 50 hours battery lifetime

- Built-in near IR-illuminator



**PKI 5225****IR-Observation System**

The **PKI 5225** is based on an uncooled infrared detector, a 360° optic and a picture and data processing device. By this, the system is used for observations of rooms and open terrain, nearly independent from surrounding sight conditions. Each picture picked up will be scanned at 25 cycles and shown at operator's monitor in a rectified form. The picture processing therefore only needs a minimal PC-capacity and enables an automatic generating of alarm-signals with a correlation to customer's needs. The very low power consumption (max. 7 W), the flexibility in regard to interfaces and the minimal weight of approx. 800 g easily allow integrating the **PKI 5225** into existing monitoring networks. With the **PKI 5225** the user will have a 360°-panoramic observation system without moving parts and

cost-effective components in the need of maintenance. Depending on the types of used IR-detectors, areas of several hundred meters can be observed with the **PKI 5225** vastly independent from surrounding weather and light conditions.

**Specifications:**

- Detector type IR uncooled
- Detection area 360°
- Detection range up to several hundred meters
- Scanning frequency 25 Hz
- Power consumption max. 7 W
- Weight approx. 800 g

**PKI 5230****Long Range Thermal Imaging System**

The **PKI 5230** is intended for the use in harsh applications including perimeter surveillance and coastal security. Therefore it perfectly matches the tasks of police-, military-, customs and border-control departments. It is a high performance thermal imager based on an indium Antimonide (InSb) 320x256, 30µm pitch focal plane array (FPA) and operates in the 3-5 µm spectral range. Its sealed housing (backfilled dry nitrogen) and marine hard carbon coated lens with front element defroster makes it perfect in all conditions incl. snow and sea. The triple-FOV lens 250-1000 mm/ F 4.0 allows a man detection up to 17 km. Also the camera features RS232 /RS422 link for fast integration in any surveillance equipment.

**Specifications:**

- Thermal imaging system with: InSb FPA array - 320 x 256 or 640 x 512 pixels
- Weatherproof: N2-pressurised housing
- Highest temperature sensitivity: NETD 35 mK in spectral range of 3 to 5 µm
- Serial remote control: RS232/422 of all camera and lens functions
- Analogue: PAL video output
- IR lenses available with: 17/60/200 mm / F4.0 or 50/250 mm / F4.0 or 250/500/1.000 mm / F4.0
- Range to detect a person: – up to 17 km
- Seawater resistant: (IP 67 / MIL-Std 810e)

**PKI 5235****Pan & Tilt Infrared Video Camera**

Meeting the challenge that darkness presents for marine applications is the **PKI 5235**. This rugged camera is especially designed to withstand the typical shock and vibration associated with marine applications. It is intended for law enforcement and public safety applications with the use on vehicles or boats. It is the next and low-cost generation of thermal imaging with a pan & tilt platform for mobile and landbased or sea-based outdoor environment. The camera can be mounted on a ship or other coastal structure and with the pan-and-tilt positioning platform, operated by a joystick controller, the user can observe or search for boats or stray objects in the water by manoeuvring and pointing the camera into the necessary direction. **PKI 5235** utilises image processing to create thermal images with improved contrast, resulting in better feature definition, sharper and clearer pictures.

**Specifications:**

- BST sensor with 320 x 240 pixels in spectral range of 8 to 14 µm
- Daylight camera optionally available
- IR camera and platform control via joystick
- Automatic gain and brightness control
- Range to detect a person: up to 450 m in total darkness



## PKI 5240

### Night Vision Binocular

**PKI ELECTRONIC INTELLIGENCE GmbH** is one of the leading distributors worldwide for night vision devices. Although the optics play a critical role of the night vision device, the heart of a night vision device and the most important component is the Image Intensifier Tube (IIT). As a leading consumer for IITs we source and acquire the best and the latest available image intensification technologies from top US and European producers. From hand selected premium grade 1st Generation to filmless/autogated 4th Generation that would satisfy the most performance obsessed clientele, we offer the best for your specific application. When you see night vision units with built-in infrared illuminators for total darkness, remember that we were one of the first to offer this feature that now has become an industry standard. All of our night vision units are outfitted with an IR-illuminator. Furthermore some of such devices offer interchangeable lenses, optical doublers and remote controls. Our R&D engineers are making sure that we are always on the cutting edge providing you with the latest in features and technology. The **PKI 5240** as an infrared, low light level device for the use in public security, armed police forces, custom houses, frontier - and safe guards for night patrols as well as investigations. In one word, the operator cannot miss using the **PKI 5240** in any kind of night observations. Being fully portable, self-powered and lightweight, this system offers a reliable tool at a cost-effective price.



#### Specifications:

- Effective visual distance 600 m
- Magnification 6 times
- Field of view 6°50'
- Objective focusing range 15 m to infinity

- Eyepiece diopter range -5 to + 2 diopter
- Exit pupil diameter 7 mm
- Resolution < 0.46 mrad
- Operating voltage 3 VDC
- Weight 2.5 kg

## PKI 5245

### Low Light Level Nightvision Goggle

If what you need is hands free night vision, **PKI ELECTRONIC INTELLIGENCE** has the unit for you to drive or walk through the darkness with the confidence of a cat with our **PKI 5245** dual eye goggle system. It is a low light level, head mounted, light weight dual eye / tube goggle being comfortable to wear and most easy to use. Surprisingly, even though we gave the unit a heavy coated glass lens, we were still able to keep its weight down to only less than 1 kg. Powered by two high quality light intensifier tubes and using fast precision optics this device has one of the clearest and brightest images in a goggle. Combine all the above with a built-in infrared illuminator that lets you see in total darkness and you will be on your way to exploring even the darkest of places. This is of most importance for the use of the **PKI 5245** by public security, armed police forces protecting the streets, custom houses, nuclear power plant security, frontier and safe guards for night patrols as well as every member of military or industrial security staffs working in dark conditions. Wherever hands-free operation is required, the **PKI 5245** offers the right solution. For the observation of suspicious objects in the dark or driving a car under no-light conditions, the **PKI 5245** provides a comfortable and



cost-effective solution. In a word, you can do nothing at night and in dark rooms without the use of the **PKI 5245**.

#### Specifications:

- Effective visual distance 150 m
- Magnification 1 time

- Field of view 45°
- Objective focusing range 360 mm to infinity
- Eyepiece diopter range +/- 5 diopters
- Resolution < 2.8 mrad
- Operating voltage 1.5 VDC
- Weight 0.9 kg

**PKI 5250**

## Long Range Video System

The **PKI 5250** - Long Range Video System combines state-of-the-art video with high definition nightvision technology. It is designed for 24 hours operation by combining three camera modules in just one housing - forming a unique system of:

- a colour CCD-camera for daylight
- a black & white camera for twilight
- an intensified camera for night time

The system is either available in 1" or 1/2" image format - in buyer's option. The lifetime of the image intensifier is optimised and the method of night vision technology only must be used in cases of absolute darkness or where it is necessary (closed dark rooms, underneath bridges etc). This **PKI 5250** optionally also is prepared for operation with infrared illuminators for spot elimination and non-visible target illumination as well as range gating applications. Optionally additional filters like infrared or band pass filter are available.

**Specifications:****A) General**

- Dimensions (without lens) 135 x 172 x 224 mm



- Weight (without lens) approx. 6 kg
- Power consumption 1200 mA (TBD)
- Operating voltage 12 VDC
- Operation temperature -10 to +50 °C (recommended 0-40°C)
- Lens format C-mount
- Lens control zoom, focus, iris
- Comm. connection RS232, RS485
- Video standard PAL/CCIR/NTSC/EIA
- Video signal FBAS

**B) Black/White Camera**

- Horizontal resolution 570 TVL
- Sensitivity 0,0006 lx (F1.2, 50% video, AGC 20 dB, normal shutter 1/50 s)
- Signal-to-noise 52 dB

**C) Colour Camera**

- Horizontal Resolution 480 TVL
- Sensitivity 0.1 lx (F1.2, 50% video,

AGC 20 dB, normal shutter 1/50 s)

- Signal-to-noise 50 dB

**D) Intensified Camera**

- Image intensifier XD 4 technology 1/2"
- CCD Sensor 1/2" interline Transfer, 752 x 582 pixel
- Horizontal resolution up to 530 TVL
- Sensitivity 0.000001 lx
- Signal-to-noise 42 dB
- Control Auto gain, auto gating - down to 1µsec (optional 50 nsec) external range gating option

- Multisensor camera system
- Image intensified, B&W and Colour
- Combined system in one housing
- 24 hours a day full operation
- Automatic back focus correction
- Selectable objectives

**PKI 5255**

## Low Light Level Viewer

A new extremely fast lens system combined with a high resolution Gen 1+ light intensifier tube gives the user an unparalleled bright image in a 1st gen. night vision device by just easy push button controls. Therefore the **PKI 5255** is recommended for most comfortable and hand held use at any observation tasks in the dark. It is a must to use this unit by police forces, secret services and other government departments where such investigations have to be effected under lowlight conditions or even in total darkness. With its effective range of approx. 150 to 200 m the **PKI 5255** provides perfectly illuminated pictures, which allows excellent observation results. The built-in IR-Illuminator

provides additional light, being invisible to the human eye, allowing the user to observe his target even if there is no surrounding light. The adjustable hand-buckling belt makes its handling very comfortable.

**Specifications:**

- Magnification: 1.38 times
- Field of view: 20°
- Resolution: < 1.5 mrad
- Dioptic adjustment range: +/- 5 diopter
- Focussing range: 0.25 m to infinity
- Operating voltage: 3 VDC battery
- Enhanced infrared lamp: built-in
- Effective visual distance: 150 to 200 m
- Weight: approx. 700 g

**PKI 5260**

## Long Range Binocular

This legendary **PKI 5260** model with its large objective diameter of 150 mm, is an magnificent tool in many sectors, covering a large range of applications, such as surveillance operations of suspect objects or persons, border control, fire prevention and other scientific researches, where a crisp, bright, sharp and high-resolution image is indispensable. Many other applications like wild animal observation, sightseeing from the top of high buildings or home balcony, hunting, shipping, fishery, forest observation etc. are also possible. This binocular, with its large aperture and high magnification of 31x to 50x allows a long range, fatigue-proof operation under every condition. The unit is equipped with a fast dual

focusing which is ultra smooth. The telescope tube is covered with a protective rubberised paint finish to help protecting it from the elements.

**Specifications:**

- Magnification: 31 - 50 times
- Field of view: 2°
- Objective diameter: 150 mm
- Diopter adjustment: - 5 to +5
- Exit pupil diameter: 4.48 mm
- Exit pupil distance: 16.66 mm
- Resolution: < 1.6"
- Interpupillary distance: 58 - 74 mm
- Weight: approx. 12 kg
- Dimensions: approx. 60 x 25 x 15 cm





## PKI 5265

### Colour Video Zoom, Camera with Monitor

In many cases of video observations sharp and clear pictures have to be achieved. Our **PKI 5265** is the right solution for this purpose. Whether in distances of only 10 meters or even up to 100 meters, this zoom-camera provides perfect resolutions with a brilliant sharpness and excellent light sensitivity. It is just the matter of a correct menu technique via the supplied cable connection. This high resolution colour camera with 480 TV-lines and the 16x zoom objective, combined with the digital, electronic camera zoom, allows the recognition of a car number plate even from a distance of 100 m. On the

supplied 19" flat screen monitor every picture is displayed and can be transferred to any storage medium.

#### Specifications:

- Resolution: 480 TV lines, colour
- Min. illumination: 1.0 Lux
- Counterlight compensation: automatic
- Objective: F = 1.4 – 2.8, f = 4.0 – 64 mm
- Monitor: 19" colour flat screen
- Power supply: 12 VDC with mains adapter
- Dimensions: approx. 70 x 65 x 95 mm



## PKI 5270

### Day & Night IR LED Camera

For a permanent video observation a clear colour picture in day time and an automatical change to B/W picture at night time, the **PKI 5270** is what you need. As our duty is to deliver the best quality we have developed this complete camera which is a highly sophisticated day & night camera for use in every outdoor surrounding where video observations are necessary. By this, industrial areas, military camps, police stations or any other territories are protected by video monitoring for 24 hours a day. A clear colour picture is given in the daytime which automatically is changed to b/w picture at night time. 180 integrated infrared diodes illuminate the area of observation at night time or low-light conditions. The complete system comes in a weather-proof housing, including a cooling-fan for the control of heat from the IR-LED's and a CDS sensor for the change from colour to b/w operation - depending on light conditions. The complete system optionally is available in PAL or NTSC version using a SONY Super HAD CCD camera with 410K pixels.

#### Specifications:

- Image Device: Super HAD SONY CCD
- Scanning System: NTSC - 525 lines /60 fields per second  
PAL - 625 lines / 50 fields per second
- Synchronisation System: Internal Synchronisation
- Number of Pixels: NTSC - 768 x 494 (HxV)  
PAL - 752 x 586 (HxV)
- Horizontal resolution: 480 TV lines
- Video output: 1Vpp 75 Ohm, composite
- Signal to noise ratio: > 45 dB (AGC off)
- Gamma characteristics: 0.45
- White balance: automatic white balance
- Back light compensation: automatic BLC

- Minimum illumination: 0.3 lux at day-time  
0.0 lux at night time
- Electronic shutter: NTSC - 1/60 to 1/10.000 sec  
PAL - 1/50 to 1/10.000 sec
- Lens mount: 260 x Zoom  
(Optical : 26 x, Digital : 10x)
- Number of LED: 180 pieces infrared LED
- Wave length: 850 nm
- Angle of IR-LED: 10° and 30° in combination
- Illuminated distance / outdoor: max 75 m
- Power supply: 12 VDC, 3 A
- Power consumption: 2200 mA
- Operating temperature: - 10°C to + 45 °C
- Weight: approx. 3.5 kg



## PKI 5275

### Dual CCD Night Vision Camera

The **PKI 5275** is designed for day and night observations with just one complete unit. It consists of two cameras in one weatherproof housing - colour and b/w. The colour camera is for use at daylight and the b/w-camera, with integrated IR-lightning diodes, covers all tasks at nighttime. Depending on the field of application various objectives for both cameras are available. Just let us have your request and we shall provide the best possible configuration. The following technical data show every possible combination.

#### Specifications:

- Signal format: NTSC or PAL for colour camera, EIA or CCIR for b/w camera
- Total pixels: 811x508 for NTSC, 795x596 for PAL 537x505 for EIA, 537x597 for CCIR

- Effective pixels: 768x494 for NTSC, 752x582 for PAL 510x492 for EIA, 500x582 for CCIR
- Horizontal resolution: 550 lines for colour camera, 420 lines for b/w camera
- S/N ratio: > 45 dB for colour and > 50 dB for b/w
- Sensitivity: 1 lux /F2.0 for colour, 0.05 lux/F2.0 for b/w camera
- Image sensor: 1/3" SONY Super HAD CCD
- Power supply: 12 VDC
- Gamma correction: 0.45
- Electronic shutter: NTSC/EIA - 1/60 - 1/100.000 sec automatic  
PAL/CCIR - 1/50 - 1/100.000 sec automatic
- Current consumption: LED on = 520 mA or less  
LED off = 280 mA or less
- Infrared LED's:



- 30 pcs, 850 nm, for 50 m distance max.
- Lenses available: 3.6 mm, 6 mm, 8 mm in buyer's option
- Operating temperature: -10 to + 50 °C

**PKI 5280**

## Long Range Video Camera

This high resolution colour camera, with its 220x Zoom-objective and integrated pan/tilt head, provides pictures of perfect brilliance and sharpness. Even a car number plate can be recognised from a distance of up to 500m and larger objects like persons or cars and boats can be observed even from more than that range. Up to 32 fixed positions of the zoom and the pan/tilt head can be programmed and recalled automatically. **PKI 5280** is supplied with a wired remote control for every function of the device. On request, it can be equipped with a wireless remote control. The complete set comes with a cable connected 19" flatscreen monitor combined with an optional high power video transmitter the **PKI 5280** is ideal for border controls and other wide range observations in outdoor conditions. Such transmitters should be selected from our wide range shown in this

catalogue. Only then we can guarantee that camera, transmitter, receiver and monitor match perfectly.

**Specifications:**

- Resolution: 480 TV-lines, colour
- Min. illumination: 1 Lux
- Backlight compensation: automatic
- Objective: f: 12-128 mm, F: 1.4 – 3.6
- Monitor: 19" flat screen
- Dimensions: approx. 420 x 350 x 220 mm
- Weight: approx. 9,8 kg
- Power supply: 12 VDC with separate mains adapter

**PKI 5285**

## Digital PCI Video Observation System

This PC-Video Card is used as a central unit for any kind of video observation. Live observation via display, recording, monitor-splitting, camera remote control and many other features are possible with this unique **PKI 5285**. All signals can be transferred either via telephone lines, internet or networks. Any alarm message can also be sent via e-mail to another PC or by SMS to any mobile phone. An acoustic and optical alarm sensor is also included for detection of any movement/ change in camera pictures. Up to 4 cameras can be connected with best possible recording quality (MPEG4 or Wavelet). Optionally this unit can be supplied with 8 or 16 video inputs.

**Specifications:**

- Video inputs: 4
- Resolution: 768 x 576 Pixel
- Recording method: MPEG4 or Wavelet
- Recording time: up to 800 hours with 200 GB-hard disc for 4 cameras and 6 pictures per second
- Required PC system: WIN 2000 or XP
- Digital motion: detector integrated
- Other features: weekly timer, digitally evidencing water mark, automatic alarm transfer, comfortable play-back and interpretation functions, databank, crash recovery, info-overlay etc.
- Scope of supply: PCI card, Software and manual

**PKI 5290 PKI 5295**

## Large IR-beam Device, Small IR-beam Device

Both systems are mainly designed for the illumination of dark rooms or surroundings with no remaining light. Wherever no electrical lights or moon/starlight are available, these devices are the perfect accessory for night-vision devices and observation cameras. This light is invisible for the human eye i.e. nobody can recognise that he is observed during night-time or in non-illuminated rooms. **PKI 5290** covers a range of approx. 20 meters while **PKI 5295** stands for approx. 10 meters. For larger distances our IR-Laser beam device is applicable (see our **PKI 5300**).

**Specifications:**

- Housing: Aluminium
- Lifetime: up to 10.000 hours
- Protection Class: German standard IP 65
- Wave length: approx. 850 nm +/- 30 nm

- Power supply: 12 VDC
- Operating temperature: - 10 to + 50°C
- Opening angle: 30°
- Power consumption: 700 mA for **PKI 5290** 400 mA for **PKI 5295**
- Max. illumination distance: up to 20 m for **PKI 5290** up to 10 m for **PKI 5295**
- Dimensions: approx. 82 x 65 x 60 mm for **PKI 5290** approx. 60 x 40 x 20 mm for **PKI 5295**
- Weights: approx. 300 g for **PKI 5290** approx. 150 g for **PKI 5295**



## PKI 5300

### Laser-Zoom Illuminator

Whenever video observations have to be made in completely dark rooms, under bridges, in tunnels or other conditions without light, this Laser-Illuminator is the only one which can cover even large areas and distances. In combination with our CCD-cameras and intensified CCD-cameras you can use this device for night-time surveillance up to a distance of 4 km. The **PKI 5300** Laser Zoom Illuminator is provided with a temperature-stabilised laser diode with a frequency range of 810nm. By means of the built-in lens system and the external control system you can adjust the zoom according to the desired illumination and distance.

#### Specifications:

- Output power: 1000 mW
- Laser class: 4

- Laser type: IR-laser diode
- Laser frequency: 810 nm
- Divergence: 1° to 12° continuously adjustable
- Power supply: 12 V DC
- Power consumption: 1,6 A
- Lifetime: 50.000 hrs
- Operating temperature: -10°C up to +50°C
- Dimensions: 70 mm diameter x 340 mm
- Weight: 2,8 kg

- Illumination Source in the non-visible spectral range
- 1000 mW Output Power
- Up to 4 km long range surveillance with ICCD cameras



## PKI 5305

### Long Range Binocular

It always has to be determined whether friendly or unfriendly objects, like cars, trucks, boats or persons are approaching a certain place and it, at any time, it has to be under complete control and supervision of the related security forces. Therefore a long range optical device is required, with which the terrain in question can be supervised. Fixed on top of high buildings, at sight-seeing spots or at borders (land- or seaside) the **PKI 5305** always is the right choice to view the scenario for any police force, border control squad or military task force. It is an absolutely necessary and important tool for observations over large distances. With an optionally available electronic eyepiece, like one of our video cameras shown in this catalogue, it can be connected with a monitor or computer, so that analysis, measurement and statistics can be

effected at save places and with the capabilities to store the pictures. With its large magnification of 25 times and the 100 mm objective diameter the **PKI 5305** enables every supervising department to effectively fulfil their tasks even under low light conditions.

#### Specifications:

- Magnification: 25 x
- Field of view: 2°30'
- Star finder: (f.o.v) 7 x 50 (5")
- Objective diameter: 100 mm
- Eyepiece diopter range: +/- 5 diopters
- Exit pupil diameter: 4
- Exit pupil distance: 14
- Resolution: 3"
- Interpupillary distance: 56 - 74
- Weight: 13 kg



## PKI 5310

### Pocket Night Vision Scope

With its very small dimensions, minimal weight and comfortable one-hand operation, the **PKI 5310** can easily be placed in any pocket and at any time it is ready for disguised observations in the dark. Especially developed for secret service agencies, police tasks forces and other government departments, this handy unit offers a perfect solution to every need of night surveillance. Through the image intensifier tube, it transfers the faint target image into a bright image, but still providing an automatic bright light control for accidentally incoming light. In addition, the device contains a concealed IR-light source for the illumination of the area to be observed. This IR-light is nearly invisible to the human eyes.

#### Specifications:

- Max. observation distance: approx. 80 to 120 m at 10-2 Lux
- Magnification: 2x
- Bright-light protection: automatic bright-light proof
- Field of view: > 15°
- Objective focal length: 57 mm
- Objective aperture: 34 mm
- Focusing range: 0.5 m to infinity
- Diopter adjustment: -4 to + 4 diopter
- Power supply: 3 VDC, battery operated
- Battery type: two batteries, type AAA
- IR lamp: concealed inside with 10 to 15 m operating range
- Dimensions: approx. 175 x 80 x 50 mm
- Weight: approx. 0,35 kg





**PKI 5315**

## Long Range Night Vision Scope

Beside hand-held and disguised units for observations at nighttime it is very often necessary to have a complete unit for longer ranges. The **PKI 5315** fulfils all requirements. With its large aperture and low-light objective, combined with the image intensifier of 2nd generation, it provides a stable and reliable night-vision system for border controls, permanent observation of industrial areas and other important points. It has a large eyepiece, enabling the user to comfortably view targets with both eyes. By using the supplied tripod, the unit can be rotated by 360° and elevated by 90° during operation. **PKI 5315** can be equipped with

a lowlight watching system, which will transfer and display the image on TV systems.

**Specifications:**

- Objective aperture: 200 mm
- Magnification: 4,8x
- Field of view: 5,6°
- Focusing range: 50 m to infinity
- Fixed diopter: -2 diopter
- Operating range:  
700 to 1000 m to discover or recognise a person
- Weight: approx. 13 kg

**PKI 5320**

## Binocular Night Vision Goggle

**PKI 5320** is a helmet-mounted night vision device for hands-free operations. It improves the remaining light by its light intensifying tube of 2nd generation and should be used for patrols, (walking or driving), medical care, reading of maps or any other observation task under poor light conditions. Due to its universally adjustable head-mounting it can be used for every observation purpose where hands-free operation is essential. The integrated IR-light helps the operator to illuminate the area to be observed with a nearly invisible IR-light.

**Specifications:**

- Magnification: 1 x
- Field of view: 38 °
- Focusing range: 250 mm to infinity
- Resolving power: 1.59 mrad
- Diopter adjustment:  
+ 2 to +5 diopter
- Exit Pupil diameter: 7 mm
- Exit pupil distance: 15 mm
- Adjustment of pupil distance:  
52 to 71 mm
- Image intensifier: 2nd Generation low-light level image intensifier
- Built-in IR lamp operating range:  
15 to 25 m
- Power supply:  
2 x 1,5 VDC batteries, type AA
- Operational time:  
approx. 25 hours without IR-light source on  
approx. 15 hours with IR-light source on

**PKI 5325**

## Night Vision System

The **PKI 5325** has been developed as a platform for underwater applications. Combined with a submersible mini monocular night vision viewer of 2nd or 3rd generation and a tactical illuminator, this device offers the best choice for any underwater purpose. It also allows fixation of an ACD (Advanced Combat Display), giving the user a remote viewing display that works underwater. The ACD can be used with a large variety of systems, such as thermal sights, night vision devices or remote cameras.

**The kit consists of:**

- Modified U.S. diver's mask Monocular Night Vision Device with:
- Multiuse monocular assembly
- Head mount assembly for land use
- Swing arm interface
- Soft carry case
- Battery adapter
- Batteries (2 pcs)
- Neck cord
- Shoulder strap
- Objective lens cap

- Sacrificial filter
- Lens tissue
- Demist shield
- Eyecup assembly

**Illuminator with:**

- High intensity underwater light Underwater personnel ID illuminators ( 3 each – red, green and yellow)
- Laser sticks (2 each)
- VIP-amber illuminator
- IR/Red bikini filter (2)

**Specifications:**

- Field of view 40°
- Submersible to approx. 20 m
- Dual mission - sea and land
- Adjustable eyepiece
- Standard rail interface
- AA-type or 3 VDC battery
- Covert application ready
- Head mounting included
- Variety of illuminators
- Kit complete in waterproof case





## PKI 5330

### Thermal Night Vision Goggle

The **PKI 5330** provides a bright clear picture of surroundings, unaffected by lights or shadows that will render image intensified night vision useless. The only way to keep your edge, whether in the battlefield or in the streets, is to have the best equipment – and the **PKI 5330** really is the best. Even camouflage will not be an asset against the detection capability of this unit. Made by latest DSP technology and ultra lightweight materials, these goggles are small and comfortable. This system is a self contained thermal unit that only requires 2 AA-type batteries to function and features:

- Digital thermal viewing
- Light weight
- Ruggedized housing
- Hands-free operation
- Helmet mountable
- Binocular viewer

- Video output
- Low MTBF
- Simple user operation

#### Specifications:

- Sensor: Microbolometer
- Detector uncooled: 160 x 120
- Image size: 320 x 240 2D interpolated
- Thermal sensitivity: < 100 mK
- Spectral response: 7 – 14  $\mu$ m
- Objective: 25 mm germanium
- Field of view: 17 x 12 degrees
- Battery type: 2 each AA type
- Operation time: approx. 2 hours continuously
- Display: FLCD - 320x240 format
- Diopter adjustment: +6 to -0
- Eye relief: 15 mm
- Dimensions: approx. 15 x 16 x 10 cm
- Weight: approx. 680 g with head gear



## PKI 5335

### Handheld Thermal Eye Camera

This handy thermal eye camera is perfect for remote monitoring, safety engineering, hunting and nature. Its easy and comfortable operation with automatic mode and tuning for focus, gain, brightness and polarity are only some of its advantages. A search monitor is integrated. People can be detected up to a distance of 1500 m.

#### Specifications:

- Spectral range: 8-14  $\mu$ m
- Sensor: BST 320 x 240 pixels
- IR-objective: 150 mm / F1.0 (25, 50, 75, 100, 150 mm optional)
- Comes with video output
- Comes with tripod thread
- Dimensions: 210 x 180 x 80 mm
- Weight: 1,4 kg



## PKI 5340

### Laser Night Vision Unit for Long Distances

This strong and high-quality night vision unit allows observations at night up to 10 km distance even at total darkness. To cover this exceptional distance is only possible due to the integrated 200 m telescope objective with 240 mm focal length and a 60 - 240x magnification. Nothing will be left to chance with the built-in 15 W laser at 860 nm range (invisible for human eye) as well as the lowlight image amplifier of 3rd generation. An indispensable device at border controls, by sea or ashore. The video control terminal with display records all events.

#### Specifications:

- Dimensions: 55 x 52 x 37 cm
- Weight: 55 kg
- Power supply: 100 – 240 V AC
- Power consumption: 350 W
- Optic: 240 mm focal length at F 1:5 to 1:20 angle: min. 0.15° x 0.11°, max. 0.61° x 0.46°
- Laser: 15" with air cooling
- Low light picture tube: III. Generation Ø 18 mm
- Video resolution: 640 x 480 pixel
- Video IN, Video OUT: NTSC or PAL
- Communication: Ethernet (TCP/IP)



## PKI 5345

### Digital Night Vision Binoculars

The quality of digital techniques is nearly equivalent to the 2nd generation of tube night vision devices. The **PKI 5345** is equipped with two IR-lights, of which one permanently illuminates the area and is for use in semi-light conditions. The 2nd IR-light can additionally be switched on and allows excellent vision at low-light conditions or absolute darkness. The integrated video output socket allows play-back via an external display or recording with an external recorder.

#### Specifications:

- Dimensions: approx. 116 x 76 x 170 mm
- Weight: approx. 800 g
- Power supply: 6 batteries type AA or power plug 7.2 - 9 VDC (not included)
- Magnification: 5 times
- Visual range: up to 150 m
- Video output: PAL/NTSC
- Lens diameter: 42 mm



**PKI 5350**

## Night Vision Binoculars

For lengthy night visions surveillances it is advisable to use night vision binoculars, because at longer surveillance operations the use of a monocular would be exhausting for your eye. The **PKI 5350** is one of the best night vision binoculars with an image intensifier tube of the 1st generation. It is rare to find something comparable, where design and easy handling have been combined so perfectly. The **PKI 5350** features an integrated infrared light which can be switched on additionally at low light conditions. It is especially useful for security agencies,

hunters, nature lovers or private ship-owners. The **PKI 5350** is equipped with automatic ON/OFF function and can be controlled via three buttons.

**Specifications:**

- Power supply: 2 x 3 V batteries
- Magnification: 5 times
- Lens: 90 mm / F 1.7
- Angle of view: 20°
- Diopter adjustment: -5 to +5
- Dimensions: 225 x 150 x 62 mm
- Weight: 1.400 g

**PKI 5355**

## Under Water Night Vision Unit

This handy under water night vision unit provides completely new working condition for divers. There is no danger of being detected at secret actions. A built-in low light amplifier with max. 100.000x light amplification allows impeccable view up to 150 m. **PKI 5355** is easy to handle under water. Two additional plummets inside the housing avoid unintended lifting up of the unit. An outer contact switch allows quick switch on/off. The lens is fixed and allows observation from 50 cm to unlimited. Operating time for battery set is 50 hours, max. diving depth 80 m.

**Specifications:**

- Dimensions: Ø 160 mm x 350 mm
- Weight: 8,5 kg
- Power supply: 6,75 V Mallory battery
- Housing: plastic, black or olive-green
- Lens: 50 mm
- Opening: 1:1.4
- View angle: 20°
- Brightness adjustment: built-in Display for observation with both eyes

**PKI 5360**

## Underwater Night Vision Glasses

**PKI 5360** should not be missing at underwater operation. The night vision device is fixed to the goggles in order to enable the diver to have both hands free for swimming. An IR-diode is integrated for additional illumination of nearest surroundings. For longer distances an underwater IR flashlight can be fixed. Due to the IR-light's invisibility for human eyes no actions will be detectable from the water surface. The goggles can be used up to 10 m depth and are equipped with standard batteries.

**Specifications:**

- View area: 31° +/- 1° ( under water)
- Resolution limit: 1,23 mrad/lp (under water)

- Enforcement: 0,98x Lens with plano-parallel window
- Focus: 24,0 mm F/1,3 Focus stepless adjustable 0,25 m to unlimited
- Ocular binocular: focus 25,5 mm
- Dioptic adjustment: stepless -5 dpt to +4,5 dpt
- Diameter of outlet pupil: 7 mm
- Eye protection from screen: 12,7 mm Eye basis, stepless adjustable 56 mm – 72 mm
- IR spotlight: provides resolution of 1,41 mrad/lp in water, effective range: approx. 2 m
- Battery: 1 x Lithium type AA 2,7 V or 2x alkaline batteries type AA 1,3 V
- Weight without goggles: 570 g

**PKI 5365**

## Infrared Spotlight

This IR spotlight has been developed for use in surveillance systems with infrared compatible CCD-cameras. With infrared light, which is invisible to the human eye, you can illuminate buildings, entrance areas, garden areas etc. This allows camera surveillance in absolute darkness as well. The extra flat and weatherproof housing includes a small cut-out for unobtrusive installation of a camera behind the spotlight. 14 long-life LED lights serve as light source.

**Specifications:**

- Power supply: 12 VDC / 400 mA
- IR-wave range: 940 nm
- Economic life-time: approx. 10.000 hours
- Angle of beam: 160°
- Range: approx. 3.5 m
- Protection against dust/moisture: IP 65
- Operation temperature: -30°C to +40°C
- Dimensions: 106 x 72 x 6 mm
- Weight: 100 g



## PKI 5370 PKI 5375

### Infrared Beam, big / small

Do you want to be able see with your camera at night as well? Or perhaps you are not satisfied with your camera that is already equipped with IR-LED lights? These infrared lights mainly serve as auxiliary light for residual light intensifying systems and some video cameras, if for example no residual light, such as stars or moon-light, is available. With these additional light sources even extremely dark rooms can be illuminated or animals hidden in bushes can be detected. With a capacity of up to 18 W at an angle of beam of 20° the **PKI 5370** and **PKI 5375** cover a distance of 20 - 40 m. Invisible to the human eye, the person observed cannot perceive the light.

#### Specifications:

- Housing: aluminium
- Economic life-time: approx. 10.000 hours

- Protection against dust/moisture: IP 65
- Operation temperature: -10°C to +50°C
- Wave length: 850 - 880 nm
- Angle of beam: 20°
- Power supply: 12 V batteries or power plug
- Dimensions:  
**PKI 5370:** 82 x 65 x 60 mm  
**PKI 5375:** 60 x 40 x 20 mm
- Weight:  
**PKI 5370:** 300 g  
**PKI 5375:** 150 g
- Power consumption:  
**PKI 5370:** 700 mA  
**PKI 5375:** 400 mA
- Range:  
**PKI 5370:** 40 m  
**PKI 5375:** 25 m



## PKI 5405

### UV-LED Torch Lamp

UV-light most often is used for recognition of falsifications and markings which are invisible to the naked human eye. The **PKI 5405** is a handheld UV-LED torch lamp which has been developed for non-destructive material testing and detection of frauds on bank notes, credit cards or other UV intensive materials. It provides a fluorescent penetrating testing, fluorescent magnetic particle testing plus being a device for all the tasks of criminal evaluations which have to be done by police forces and other government agencies. Marks, fingerprints or any other evidence, made by invisible UV-ink on bank notes or other documents, can be made visible by the **PKI 5405**. It is a lightweight, portable and easy to handle unit which is useful anywhere. It does not need any warming-up time and emits 98,9 % of the UV-A spectral range.

#### Specifications:

- Spectral range: 315 - 400 nm
- Voltage: 4,8 VDC (4 accus, 1,2 V each)
- Current: approx. 380 mA
- UV-source: 10 x UV-LED's
- Lifetime of LED's: approx. 10.000 hours
- Wavelength of LED's: 380 nm
- Half-width of emission: 10 nm
- UV-light intensity: approx. 1.000 µW/cm at 200mm distance approx. 2.400 µW/cm at 70 mm distance
- Weight: approx. 250 g
- Dimensions: approx. 170 x 45 mm
- Comes with: UV torch lamp, 4 x rechargeable batteries, Mains power supply charger 110/220 VAC



## PKI 5410

### IR Torch Lamp

The **PKI 5410** emits a powerful and directional beam of IR-light being invisible to the human eye. IR-light sources can only be used in combination with night vision devices (see our products in this catalogue) and therefore this unit, with its integrated brightness control, is the ideal solution for observation tasks under bad light conditions, in the total darkness with fully clouded sky or at problematic locations. This torch lamp has been developed according to the latest technical standard. It is lightweight and easy to handle. A 5 mW IR-Laser-Diode inside the **PKI 5410** provides the necessary power for ranges of up to 100 m. With the adjustable optic the beam can easily be focussed. The unit is powered by a rechargeable NC-battery and a lid protects it from switching on by mistake. **PKI 5410** is supplied as a complete unit with mains charger and transportation case.

#### Specifications:

- Wave length: 780 nm
- Output power: CW 5 mW
- Power supply:  
built-in NC-rechargeable battery
- Charging time: max. 12 hours
- Switches: ON/OFF
- Connectors:  
Socket for mains charging adapter
- Indicators:  
Operation control lamp  
Charging control lamp
- Accessories:  
Mains charging adapter  
110/220 VAC





**PKI 5415****IR-Hybrid Illuminator**

Many cameras are night-blind, this means you can't see anything at night. With a standard IR-light only 20 m will be possible. This, however, often is not sufficient. Therefore **PKI Electronic Intelligence** has developed a hybrid illuminator with a range of 200 m. This LED illuminator consists of 560 LED's on one chip, bundled by 2 convex lenses which allows you to reach this enormous distance. It can only be topped by very expensive laser within IR-range, however, these laser can cause serious eye injuries. **PKI Electronic Intelligence** recommends to up-grade your cameras!

**Specifications:**

- Range: 200 m at 0 lux darkness
- Power consumption: 60 W
- Angle of radiation: 20°
- Operating time: more than 10 years
- Weight: 3,7 kg
- Dimensions: 200 x Ø 60 mm
- Power supply: 12 V DC

**PKI 5420****Wide Range Spotlight**

**PKI 5420** spotlight provides white halogen light over a wide range. Its shockproof housing made of synthetic material is tough and easy to handle. Due to the special parabolic metallic reflector the precise concentration of the light makes it an efficient portable device. The "economy" key enables to reduce the light intensity to a preset value which considerably increases the operating time. The energy pack can be detached from the light head and be replaced by a spare pack, which allows doubling of the operating time.

**Specifications:**

- White halogen light, concentrated 35 minutes of max. light intensity
- 3,5 hours max. non stop operation at "economy" mode
- Rechargeable NiCd battery 7,2 V / 7 Ah
- Charging time: 14 h
- Halogen lamp: (type H3) 6V / 55 W
- Dimensions: 340 x 85 x 110 mm
- Weight: 2,3 kg

**PKI 5425****Long Range Scope with Audio / Video Recording**

This device offers a magnification of up to 100 times, with step less adjustment starting from 25 times. In order to help focusing the correct direction it is equipped with a direction finder, featuring a magnification of 6 to 25 times. By simply turning the button, the magnification range switches to 25 - 100 times. The ocular is mounted at an angle of 45° and is freely rotatable, which allows comfortable handling in all surveillance situations. The digital audio / video recording system realizes excellent recordings at a distance of more than 1000 m. With the **PKI 5425** long distances will never be an obstacle any more.

**Specifications:**

- Main magnification: 25-100 x
- Magnification direction finder: 6-25 x
- Main lens diameter: 100 mm
- Lens diameter direction finder: 25 mm
- Interpupillary distance: 12-16 mm
- Ocular: mounted at an angle of 45°
- Vision range at 1000 m: 11 x (100 x) 39 m (25 x)
- Dimensions: 425 x 119 x 165 mm
- Weight: 1.5 kg
- Video kit: tripod, recorder, automatic volume control, TFT display 2.5"

**PKI 5430****Spy Glasses**

Seeing is knowing! Some events require special handling, especially body guards for VIPs need extra equipment. Not only they have to be patient, but must be on alert in any situation. Our **PKI 5430** spy glasses are indispensable in order to support them doing their job as with these special glasses they can look backwards, and see at any time what is going on behind your back. The sun glasses are designed in a way, that a sideward reflection gives a clear picture, similar to a real-view mirror.

**Specifications:**

- Dimensions: normal sun glasses with metal bridge /bracket
- Looks like common sun glasses





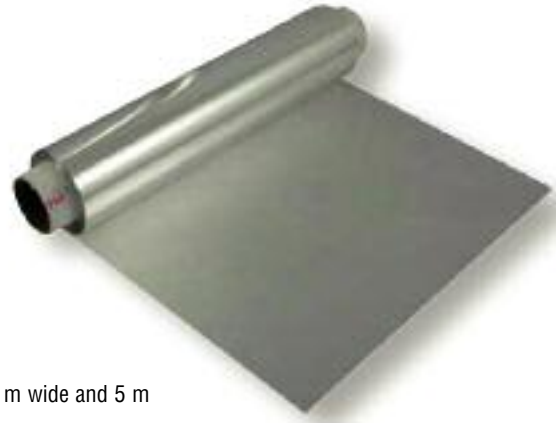
### PKI 5435

## Mirror Film for Observation

Trust, but verify! Unfortunately this statement has become true quite often. Using our mirror film you can look from one room into the other without the person becoming aware of it. All you need is a wall with a glass pane. Just stick the PKI 5435 film onto the pane and it will only be possible to look through it from one side, i.e. the observed person cannot see the observer. Formerly so-called "look through mirrors" were used but with our film you can decide individually which pane you want to transform.

#### Specifications:

- Delivery: rolled mirror film 1 m wide and 5 m long, self-adhesive



### PKI 5440

## Night Observation Camera without Flashlight

With this camera you can take photos at night at a range of up to 150 m without any flashlight. Often this is necessary during monitoring operations. Images taken by night with low-light amplifiers often are not clear enough and the price for these cameras are considerably high. Our hybrid illuminator offers this long range at 0 Lux darkness. The infrared radiation is invisible for human eyes. This digital camera is also designed for IR-range and makes it easy to take high-quality pictures at night.

#### Specifications:

- IR-range: 150 m
- Radiation angle: 20°

- Power: 60 W
- Focal distance: 50 mm
- Power supply: batteries
- Comes with charger



### PKI 5450

## Camouflaged Audio / Video Multifunctional Camera for Police Operation

This multifunctional camera is the latest high-light in the camera sector and fulfills all needs for police operation in order to provide security to population. It is perfectly designed in an anthracite grey aluminium cylinder with dimensions of 80 x cm 16 cm diameter.

The cylinder unit, equipped with a quick release fastener, can easily be mounted on any lighting mast within a few minutes. The solid device is sufficiently protected against vandalism. As **PKI 5450** works totally autarkic no cables for operations up to max. 100 hours are necessary. For permanent use the device offers various sockets for different voltage.

This high-tech device consists of a pan/tilt camera for day and night with recorder, digital transmitter for audio video with encryption system, telemetric transmitter and receiver, sensor technology unit and power supply module as well as a portable control unit within a case for controlling, monitoring and programming.

The pan/tilt camera with zoom function offers pinpoint audio video monitoring of outdoor areas at day and night. The system can be switched from permanent to sensor operation, i.e. the built-in motion sensor will be activated by captured actions or movements, which automatically starts the whole system.

Cascading is also possible, provided for example every 100 m one of our multifunctional camera is installed. In case of a convoy with VIPs driving down a certain road, all actions will be automatically monitored and recorded. Transmission of audio video signal is effected with high resolution and frame rate. Diversity-antenna-principle is used for reception, which means that the antennas are slightly displaced allowing multiple reception of the antenna signals.

The various antenna signals will be evaluated and only the best parts will be combined to a high-quality, error-free signal. This offers a considerable advantage compared to standard receivers in respect of range and transmission



quality. According to the selected power the range of the audio video digital transmitter reaches up to 3 km.

The portable control unit can evaluate up to 8 systems sequentially. All actions will be recorded and can be transferred at any time by USB cable in order to view them on PC. For further security, the transmission of video signals is done via encrypted signals.

There is a bi-directional telemetric radio connection for all functions between multifunctional camera and control unit. All details are shown on the built-in LCD-display. If required, we offer 2 days training for correct operation of our professional audio video monitoring system.



## PKI 5450

# Camouflaged Audio / Video Multifunctional Camera for Police Operation

### Specifications:

- Dimensions of housing: 80 cm x 60 cm diameter
- Protection class: IP 64
- Weight: 48 kg
- Material: aluminium plastics, anthracite, other colours available on request
- Fixing: 4 metal quick release fastener
- Antennas: integrated in plastic part
- Power supply: integrated L-ion/polymer 160 Ah, 14V, external sockets, 12 V DC / 230 V AC
- Power consumption: approx. 30 W
- Operating temperature: -10° - +50°C

### Camera

- Resolution: 520 TV lines
- Sensitivity: 1 lux colour - 0,05 lux black/white 0 lux IR
- Frame acquisition: 1/4" ex view HAD CCD
- Signal format: PAL
- Effective pixels: 795 H x 596 V
- S/N ratio: 50 dB
- Lens: 4=3,25 – 88mm
- Zoom: 27x optical / 12 x digital
- Pan/tilt range: H = 350° (max. 120°/sec)  
V = 90° (max. 120°/sec)
- White balance: auto/indoor Manual/outdoor
- Shutter speed: 1/50 - 1/50.000
- Synchronisation: internal
- Video output signal: 1 V@75 ohm composite
- Iris control: auto/manual
- Sensor: motion detector
- Preset function: 128 positions
- Private zone: 8 zones
- Interface: RS 485
- Alarm input: 4
- Power supply: 12 V DC
- Power consumption: 1 A
- Weight: 2,5 kg

### Digital Recorder

- Resolution: 720 x 576 @ 25 fps
- Recording time: 50 hours
- Compression: MJPEG
- HD: 120 Gbyte SATA
- Power supply: 12 V DC
- Power consumption: 7W
- Weight: 650 g

### Encryption

- Mode: AES with 256 Bit
- Encryption possibilities: more than 34 x 1038
- Power supply: 12 V DC, 70 mA
- Video band width: 4,8 MHz

### AV digital transmitter/receiver

- COFDM: Coded orthogonal Frequency Division Multiplying
- Frequency: GHz-range
- Channels: 8
- Power: 100 mW / 1 W switchable, higher power available on request
- Power consumption: 100 mW / 15 W, 1 W / 55 W
- Weight: 1,5 kg
- Power supply: 12 V DC
- Receiver antennas: 1-4 SMA
- Receiver outlet: audio/video

### Telemetric transmitter/receiver

- Frequency: 868 – 868.60 MHz
- Channels: 8
- Power: 25 mW – 4W
- Data transmission: bi-directional
- Interface: RS 485
- Power supply: 12 V
- Power consumption: 1,8W – 24W

### Control unit

- Housing: pelicase, plastic
- Display: 12" TFT
- Remote control: bi-directional telemetric transmitter for pan/tilt camera, a/v signal, day/night, a/v recorder, battery display
- Digital receiver: 8 channels
- Antennas: diversity-principle
- Dimensions: 485 x 390 x 190 mm
- Power supply: 12 V DC L-ion/polymer battery
- Power consumption: 25W
- Weight: 8,5 kg

## PKI 5490

### AV Miniature Transmission/ Reception Set

Unbelievable - a complete miniature transmission/reception system smaller than a matchbox! This set, licensed for the 2.4 GHz range, is inconspicuous and easy to carry on you. The microphone captures conversations at a distance of up to 10 m. An external camera can be connected. The **PKI 5490** allows quick and uncomplicated room monitoring. The small earphone, that is included in this set, is perfect for play-back of the audio signals.

#### Specifications:

- Frequency: 2.4 GHz, 4 channels
- Range: 300 m in open spaces
- Dimensions: 43 x 28.5 x 16 mm
- Weight: 25 g
- Power supply: 6 V DC



## PKI 5500

### Digital Audio/Video Transmission System

The **PKI 5500** Digital Video/Audio Transmission System is part of a complete end-to-end digital wireless system consisting of Digital Audio/Video Transmitter with RF output from 100 mW to 2 W and Digital Video/Audio diversity Receiver. En-cryption optionally is available. Low power consumption and compact dimensions make the system perfectly suitable for mobile use.

#### Specifications:

- Transmission Power: 100 mW 2 W
- Transmission frequency: 2.3 - 2.5 GHz
- Signal bandwidth: 6 MHz, 7 MHz, 8 MHz
- Transmission rate: 4 - 31 MBit/sec (effective: 3.3 - 27 MBit/sec)
- Delay time: 300 ms
- Video Input: FBAS, S-Video, SDI (optional)
- Video standard: PAL/NTSC/SECAM
- Compression: MPEG-2 (ML@MP)
- Modulation: COFDM (QPSK, 16 QAM, 64 QAM)
- Encryption: optional 168 Bit / 3DES

- Power consumption: 18 W 60 W
- Power supply: 9 - 30 V DC 24 V DC
- Video IN: Mini DIN plug, BNC
- Video OUT: BNC
- Audio IN: Cinch/RCA
- Audio OUT: Cinch/RCA
- Control IN: 9-pole Sub-D-plug
- Antenna: SMA
- Weight: 950 g 3500 g
- Operating Temperature: +5°C - +50°C

- Compact Dimensions
- Low Power consumption
- Operator controlled digital scrambling
- Rugged, ergonomic and portable



## PKI 5505

### Wireless Digital Camera System with Eavesdropping Protection

Intelligent frequency hopping technology stands for bugproof digital connections. Due to digital technologies all transmissions will be absolutely interference-free and the picture at the receiver will be enlarged. An integrated microphone offers first class audio quality. The **PKI 5505** features automatic activation of the IR-light for operations at night. The weatherproof metal housing allows operation in- and outdoor.

#### Specifications:

- Dimensions: camera 68 x 60 x 160 mm receiver 80 x 45 x 85 mm
- Camera: objective F=3,6 mm / 2.0 lux 1/4" CMOS-Color, 360 TV lines
- Microphone: built-in
- Range at night: 20 m
- Metal housing weatherproof: IP 44
- Transmission: 2,4 GHz range
- Receiver: 4 channels with A/V output, Digital image with zoom
- Comes with: antenna, camera mounting, A/V cable, 2x power adapter and installation material.



**PKI 5510**

## Wireless Digital Video System

The **PKI 5510** is a digital wireless transmitter that provides exceptional video quality in high multipath environments. Ideal for use in urban environments or for transmission from mobile platforms, where equivalent analogue equipment would suffer tearing and break-up. The narrow bandwidth modulation offers unprecedented spectral efficiency, while also increasing the sensitivity of the system and therefore range. It provides a rugged non-line-of-sight link over a range of up to 500 m. This transmitter is equipped with video- as well as two voice- and data-channels. The 100 mW output power makes it ideal for covert, body-worn, UAV and short range applications. Optionally a 256 bit encryption is available for a secure transmission.

**Specifications:**

- Video-Format: PAL/NTSC at narrow band bitrate of 1.2Mb/s to 4.8 Mb/s
- Horizontal resolution: 720, 528 or 480 lines
- Audio bit rate per channel: 64 kb/s to 364 kb/s
- Data: RS-232 control port and TTL asynchronous input with up to 115200 bps
- RF tuning range band: L-band - 1.15 to 1.4 GHz  
Low S-band - 2.28 to 2.45 GHz
- Bandwidth: narrow band 2.5 MHz
- Modulation: QPSK 1/3 (1.2 Mb/s)  
QPSK 2/3 (2.4 Mb/s)  
16QAM 2/3 (4.8 Mb/s)
- Output power: 100 mW at 20 dBm
- Power Control: 30 db in 1 db steps
- Power supply: 9 to 16 VDC
- Power consumption: 6.3 to 7.5 W (configuration dependant) 0.1 W at sleeping mode
- Dimensions: 129 x 70 x 28 mm
- Weight: 400 g
- Environmental temperature: -10 to +50° C
- Highly efficient 2.5 MHz narrow band COFDM modulation
- Excellent image quality in high multipath environments
- 500 m typical transmission range at 100 mW output power
- Optional DVB-T compliant 2000 carrier modulation
- Optional 256 bit encryption
- Small package size suitable for covert and body-worn applications
- L-Band and S-Band available in buyer's option
- Two high quality audio-, and one data channel provided
- DC operated at 9-16 VDC
- Battery input with recharger

**PKI 5515**

## Digital Video Transmission / Reception Set

As an outstanding video set, **PKI Electronic Intelligence** offers this highly sophisticated audio/video transmitter and receiver. Integrated error correction is one of the main advantages nowadays. This provides constant image quality and prevents from interferences like identikit pictures and dropouts. Useful functions like freeze-frame, display of signal strength and switchable transmission power are part of our standard features. Furthermore the system is equipped with a digital 168 Bit encryption in triple DES-mode 3DES.

**Specifications:**

- Transmission power: 100 mW, 1 W, 2 W, 4 W, 10 W
- Frequency range: 2,2 - 2,25 GHz or 5.725 - 5.875 GHz
- Signal band: 6 MHz, 7 MHz, 8 MHz
- Transmission rate: 4 MBit/sec - 31 MBit/sec
- Delay-time: 150 ms / 300 ms
- Video input: analogue composite, S-video
- Video standard: PAL / NTSC / SECAM
- Compression: MPEG-2 (ML@MP, 4:2:0)
- Modulation: COFDM (QPSK, 16QAM, 64 QAM)
- Power supply: 9-28 V DC, 22-30 V DC, 12-26 V DC, 24-30 V DC depending on version
- Power consumption: 12 W, 96W, 250 W
- Dimensions: 170 x 65 x 20 mm, 135 x 145 x 43 mm  
135 x 235 x 43 mm, 215 x 297 x 83 mm  
215 x 297 x 133 mm depending on version
- Weight: 250 g, 740 g, 1200 g, 3500 g, 6500 g
- Operating temperature: -5°C to +50°C
- The receiver goes well with our 5 different digital powerful transmitters and is equipped with a diversity antenna.
- Frequency range: 2,2 - 25 GHz and 5.725 - 5.875 GHz
- Power supply: 9-30 V DC
- Power consumption: 12 W
- Dimensions: 220 x 215 x 60 mm
- Weight: 1400 g
- Operating temperature: 0°C to +50°C
- Video out: BNC
- Audio A out: Cinch/RCA
- Audio B out: Cinch/RCA
- Antenna: SMA
- DC 9 - 30V: 2,5 x 5,5 mm jack



## PKI 5520

### Digital Video Encryption System

This high professional encryption system ensures that no video pictures will be captured or decrypted during transmission. Using a great variety of encrypting keys it guarantees highest possible security for all police and military transmissions. Decoder and encoder use the same private key for decoding the signal. The system provides key sets programmed by the producer which can be individually combined in order to get single decoder/encoder pairs or, if necessary, decoder/encoder units.

#### Specifications:

- Encryption possibilities: more than  $3.4 \times 1038$
- Power supply: 12 V DC
- Power consumption: 70 mA
- Input: 1Vss@750hm (BNC)
- Output: 1 Vss@75 Ohm (BNC)
- Line cut: high-secure, with additional torsion of video signal
- Video signal interference: decryption stays active
- Video band width: 4.8 MHz
- Dimension: 100 x 67 x 28 mm
- Weight: 220 g
- Operating temperature: -10°C to +70°C



## PKI 5525

### Digital A/V Repeater System

**PKI** only produces repeaters upon receipt of an order as the individual requirements are very different. It is not possible to meet all specifications with one device. When does it make sense to use a repeater? Quite often the transmission power of A/V monitoring units is too low to guarantee large transmission range. This increases the risk of discovery of receivers nearby. The repeater (portfolio size and well camouflaged) receives the A/V signal and transmits it over a distance of several kilometres. It not only enlarges the distance considerably but also helps to overcome constructional and geographic barriers. Suitable for mobile as well as for stationary use.

#### Specifications:

- Frequency: RX, TX
- Power: TX
- Antenna: omni-directional antenna or directional antenna
- Power supply: 12 V DC, battery, 120 – 240 V AC
- Version: A/V IN and Out  
GPS, GSM, Internet, Display, channels, remote, coding possible



## PKI 5530

### Audio / Video Transmitter Lapel Camera with Digital Receiver

This miniature camera is perfect for unobtrusive wearing on the body. It is nearly invisible and easy to fix in the buttonhole whereas the transmitter is placed in your pocket. Now you can listen to conversations at a distance of up to 400 m via the 12-channel receiver. Alternatively you can use a digital recorder instead of the transmitter/receiver of which you will find a wide range in our catalogue.

#### Specifications:

- Dimensions: 25 x 25 mm
- Sensor: CCD Chip, colour
- Frequency: 1,2 GHz or 2,4 GHz range
- Microphone: Electret
- Transmitting power: 400 mW
- Channels: 12
- Power supply: 9-12V DC



## Repeater

When does it make sense to use a repeater?

Quite often the transmission rate of audio video monitoring systems is too low to guarantee large transmission ranges. The danger of discovery of receivers nearby is quite high. The repeater (pocket-size and well camouflaged) receives the A/V signal and transmits it over a distance of several kilometres. The repeater not only enlarges the distance considerably but also helps to overcome constructional and geographic barriers. Suitable for mobile as well as for stationary use.

## Frequency Ranges for Audio / Video Transmission

### Frequency range 2.4145 – 2.4705 GHz

This frequency range is approved all over Europe. It is used for industrial and commercial operations. Transmitting power of 10 mW can be divided into 5 channels. 3 channels can be used for parallel operations. Standard video signals will be transmitted in PAL, NTSC or SECAM data format. When using a sensitive receiver within sight a range of approx. 300 m can be obtained and even 600 m with an external 8 dB antenna.

### Frequency range 2.3670 – 2.3740 GHz

This frequency range is developed for industrial, commercial and scientific applications in mobile agricultural broadcast and for police for example. Transmission power of 10 W (HF) and 25 W (EIRP) is possible, divided into 16 channels. Standard video signals of PAL, NTSC or SECAM data format can be transmitted approx. 9 km within sight and even 21 km with external 8 DB antenna.

### Frequency range 5.732 – 5.867 GHz

This audio / video transmission range is especially suitable for industrial and commercial operations and for special tasks. The transmission power of 25 mW can be divided into 16 channels of which 6 channels can be used for parallel operation. Video signals of PAL, NTSC or SECAM data format can be transmitted. These frequencies are approved all over Europe. Range will be approx. 150 m at sight, and approx. 300 m when using an external 8 dB antenna.

### Frequency range 0.868033 GHz – 0.868560 GHz

These frequencies are designed for analogue and digital switching signals with a transmitting power of 25 mW. 8 channels are available of which channel 1 and channel 8 can operate parallelly. The frequencies comply with European regulations. Range is approx. 3 km at sight. We can deliver special systems in the 0.869 GHz range with up to 10 W and 32 channels.

### Frequency range 0.4332 – 0.4346 GHz

This range can be used for unidirectional transmission of analogue switching and audio signals. The transmission power of 10 mW can be divided into 8 channels. Channel 1 and 8 can operate parallelly. The frequencies are approved all over Europe. The range is approx. 4 km at sight.

### Frequency range 24.040 – 24.230 GHz

These frequencies are for point-to-point transmission. Data format PAL, NTSC or SECAM will transmit standard video signals. Transmission power is up to 100 W and can be divided into 16 channels. The used antennas are directional antennas with high gain. Its range is 5 km at sight using 36 dB antenna.

## Antenna techniques

Omnidirectional and directional antennas have on their horizontal plane an almost circular directional diagram. Therefore radiation is crosswise to axle. In general this means that a higher antenna gain induces a plainer emission angle and consequently a larger emission range. On the other hand, directional antennas show on horizontal and also on vertical plane a strong directed emission. Due to this fact they are less susceptible to interferences from other directions. Generally you can say that the higher the gain, the planer is the emission angle and the longer the range.

## The diversity function

If possible the user wants to obtain a high-quality, failure-free signal especially if he has challenging applications in urban or mountainous areas. In order to achieve this aim PKI provides on request video receivers with several slightly staggered antennas which allows multiple reception of the signals. The system evaluates the various signals and the best parts will be combined to one single high-quality and failure-free signal. This method represents a great advantage compared to normal receivers concerning range and transmission quality. A progression of this antenna function is the SMRC-diversity unit. The digital system combines ideally the benefits of a maximum ratio combining and a selection combining technology. It mainly consists of a diversity receiver and an antenna system with 8 independent antennas. The obtained results will exceed all expectations and provide an outstanding level of transmission quality, coverage and range which common video transmission systems never achieve.

## Audio Video Digital Transmission

COFDM stands for Coded Orthogonal Frequency Division Multiplexing! It is a supplement to OFDM digital modulation scheme providing integrated digital false correction, selectable guard interval, resistance against multipath fading and burst failures. COFDM is perfectly suitable for mobile reception of digital signals.

The modulation plays an important role for the transmission. "QPSK" is designed for sound, faultless transmission, "16 QAM" is sufficient for normal picture quality, whereas "64 QAM" can be selected for highest picture quality as it works with highest data transmission rate.

### Digital Way of Compression GOP (Group of Picture)

This way of compression (MPEG-compression) reduces video pictures of a video stream differently. The so-called I-frame (Intra-frame) will be compressed independently from the other pictures and is in general the largest data file of the video sequence. The I-frame serves as basic information for the following pictures (B-frames = bidirectional frames) and defines their reference within the video stream. They are considerably smaller because only their discrepancies to other pictures are stored, as they cyclically appear as GOP (Group of Pictures). They are followed by the P-frame (predicted frame) that contains reference information for the I-frame, which is the basic data for this kind of compression. One GOP expands from one I-frame to the next. GOP's often have a length of half a second. The following types of pictures can be included: I-Picture resp. I-frame, reference pictures (equivalent to freeze image and independent of others). Every GOP starts with this type of frame.

### Digital Data Transmission

#### What is meant by Guard Interval?

The time period which is available for a reflection is indicated as the guard interval. A guard interval of  $\frac{1}{32}$  allows longer reflections but also means a lower rate of data transmission. When using a guard interval of  $\frac{1}{32}$  only shorter reflections will be compensated resulting in a higher rate of data transmission.

#### What is meant by code rate?

The code rate indicates how many of signal parts will be used for error correction. Code rate  $\frac{1}{2}$  means that half of the signals will be used for error correction whereas code rate  $\frac{7}{8}$  only needs  $\frac{1}{8}$  of the signals. Consequently, the effective data rate is higher in code rate  $\frac{7}{8}$  as much more signals will be used for transmission.

#### What is meant by band width?

The band width indicates the quantity of signal transmitted. This means, the higher the band width the more data can be transmitted. When using more systems parallelly a lower band width has to be selected in order to avoid interferences and to increase stability and quality of the transmission.

#### PKI 5535

### Audio / Video Transmitter

The **PKI 5535** is available in various power grades. Furthermore, you can choose between 1,2 or 2,4 GHz frequency. Both include antenna and power plug. All cameras of our catalogue are compatible with our transmitters/receivers. These sets are designed for simple wireless transmission of audio and video signals and cannot be compared with our coded digital transmitters and receivers - neither concerning their capacity nor their price.

#### Specifications:

- Frequency: 1,2 or 2,4 GHz range
- Channels: 8
- Power: 200 mW, 500 mW, 1000 mW, 2000 mW, 5000 mW
- Range: 100 m – 2 km depending on power

- Antenna socket: SMA
- Power supply: 12 V DC, power adapter included
- Housing: aluminium
- Dimensions: 82 x 52 x 18 mm

- Weight: 50 – 500 g according to power
- A/V: IN socket
- Various: channel switch, LED control lamp, ON/OFF switch



#### PKI 5540

### Video Receiver with Built-in Directional Antenna

This compact device consists of a directional antenna and an audio / video receiver - both integrated in one unit. It is not necessary to connect an external antenna. By means of the directional antenna an aerial gain of 8dB can be obtained. Due to its small dimensions of 58 x 56 x 13 mm this device can be used everywhere.

#### Specifications:

- Frequency range: 4 channels 2.4 – 2.4835 GHz, 1.4 GHz upon request
- Aerial gain: up to 8 dB
- Opening angle: 35°

- Dimensions: 58 x 56 x 13 mm
- Protection class: IP 65 (suitable for outdoor use)
- Operation temperature: -20°C to +60°C
- Weight: 300 g
- Video output: 1 Vp-p/75 Ohm
- Audio bandwidth: 50-17000 Hz
- Power supply: 7.5V DC
- Power consumption: 200 mA



**PKI 5545**   **PKI 5550**

## Wireless Camera and Transmitter in a Cigarette Packet Wireless Camera and Transmitter in a Mobile Phone

Some operations require extremely sensitive observation methods. Without camouflage a quick reaction is nearly impossible. These devices transmit audio and video signals wireless over a distance of 150 m in 1,2 or 2,4 GHz range at a power of 100 mW. In our catalogue we offer various compatible receivers, also with built-in A/V recorder.

### Specifications:

- Dimensions: standard cigarette packet, standard mobile phone
- Transmission time: 90 minutes
- Transmission power: 100 mW
- Weight: **PKI 5545** 60 g  
**PKI 5550** 110 g
- Power supply: rechargeable battery, built-in
- Frequency: 1.2 or 2.4 GHz  
Comes with power plug


**PKI 5555**

## Camouflaged Cameras

Electric box, Belt, Helmet, Tie, Button, Glasses, Rear view mirror, Sport cap

Often mobile and camouflaged camera systems are the only effective possibility for specific observations. **PKI's** camouflaged cameras inconspicuously fit into the environment, selected according to their application and their stylish integration. Of course, **PKI Electronic Intelligence GmbH** will comply with your specific requirements. Our cameras, which all are quite similar have the following specifications:

### Specifications:

- Camera: 1/4" CCD Chip, colour
- TV lines: 470
- Min. illumination: 1 Lux
- Power supply: 9-12 V DC
- Video output: Vpp / 75 Ohm
- Operating temperature: -10°C to +50°C

- Various: In our catalogue we offer various kinds of pocket transmission / reception recorders, that we can strongly recommend for use with our cameras.


**PKI 5565**

## Intelligent 360° Day and Night Observer

Fixation of this 360° camera is very simple and quick, as it is equipped by a ground spike. The unit consists of 3 cameras, which allows an all-around observation. Activated by a sensor or remote-control it stores all captured data on a digital recorder. At darkness the high-power LED's are automatically switched on, so that night visions can be effected up to a distance of 100 m. The built-in GH-transmitter transfers the audio and video signals up to 500 m to a LCD-receiver. The observer is controlled by remote pocket transmitter.

### Specifications:

- Image sensor: 3x 470 TVL
- Shutter: automatic
- Frame rate: live video, 24 fps
- Microphone: records conversation up to 10 m distance
- TFT-display: 6,4"
- Remote control: camera, zoom, ON/OFF
- A/V transmitter: GHZ-range
- Dimensions: Ø 380 mm x 150 mm
- Weight: 4 kg
- Power supply: dry fit battery 12 V / 80 Ah, set into soil





### PKI 5570

## Security Camera IR + Night Vision

This combination of IR + Night Vision allows observation in any light conditions, in moments of daylight and total darkness, moonlight or starlight. **PKI** security camera is often used by police and military departments, but also by security companies. Day and night observation with video recording is as easy and comfortable as might be with this lightweight camera.

#### Specifications:

- Dimensions: 206 x 150 x 80 mm
- Weight: 1 kg
- Operating temperature: -10° to 50° C
- Power supply: DC 12 V, 4W
- Environment: IP 65
- CCD: Zoom 13,3 fold  
(6,7 x optical, 2,0 x digital)
- Minimum illumination: 0,0001 Lux starlight
- Lens: varifocal IR, auto iris
- Optics: F /1.3, f=7,5 – 50 mm
- FOV: 5,64° - 36,6°
- Target detection: >2 km for man size object



### PKI 5575

## Hybrid IR-Camera

This camera is indispensable for professional use, not only because of its high resolution 1/4" color chip but also due to its 3,9 mm to 85,8 mm zoom optic with 22x optical magnification. Additionally it offers a controllable IR-light for night vision up to a distance of 80 m.

#### Specifications:

- Dimensions: 270 x 250 x 100 mm
- Weight: 1.3 kg
- Objective: 3.9 - 85.8 mm
- Zoom: 22x optical magnification
- IR-range: 80 m
- Resolution: 550 TVL
- Power consumption: 14W
- Operating temperature: -20°C - 60°C
- Hybrid IR chip: LED IR 36
- Method of transmission: through a pair of optical lenses
- Life span: over 10 years
- Radiant intensity: 150 mW/Sr (12.70)



### PKI 5580

## 24 Hours Surveillance Camera

This camera not only provides an excellent design but is designed for 24 hours outdoor use, without interruption. This allows observations by night at 0 lux up to 100 m distance with 8 high power and 12 IR LED's. Its technical features are outstanding! This is an unique and solid camera for every day use!

#### Specifications:

- Dimensions: 60 x 70 x 110 mm
- Weight: 800 g
- Power supply: 220V AC
- Objective: 6-60 mm standard version, others upon request
- Zoom: 22 x
- Housing: aluminium with cover against rain and sun
- Chip: 1/4" Super HAD CCD and DSP digital processing
- Resolution: 420 TVL
- IR-LED's: 8x High power and 12 x IR LED's
- Range: 100 m



**PKI 5585****Audio / Video Surveillance Case**

This A/V surveillance case, designed for mobile operations, records signals sent by wired and wireless cameras. Video signals will be shown on TFT display in pin sharp quality. Even frequencies for control of external devices can be captured. All connecting cables and adapter are included in practical compartments inside the case.

**Specifications:**

- Dimensions: 390 x 330 x 110 mm
- Weight: 4 kg
- Display: TFT, 5,6"
- Loudspeaker: built-in (for audio transmission)

- Power supply: built-in rechargeable battery for 2,5 hours, built-in power adapter / charger 220V, cable for car use
- Receiver: Audio and video, channel switch with analog display, channel switch output
- Frequencies: 1,4 GHz, 2,3 GHz, 2,4 GHz and 5,8 GHz further frequencies upon request
- Antenna: to be clipped on car window
- Miscellaneous: port for external video recorder available (please see **PKI** digital recorder)

**PKI 5590****Audio / Video Special Surveillance Case**

Integrated in a hardcover protective case you will find an interesting surveillance unit. Besides receipt of signals from wired and wireless cameras the built-in telemetric module of the unit can alter camera settings, such as angle, adjust zoom, focus, day/night setting.

**Specifications:**

- Dimensions: 550 x 370 x 230 mm
- Weight: 18 kg
- AV receiver: available frequencies: 1,4 GHz, 2,3 GHz, 2,4 GHz, 5,8 GHz further frequencies upon request, channel switch with analogue display
- Switching channel output: - 500 mW, frequency

868 MHz, transmitting power 25 mW

- Telemetric transmitter: Joystick / 200 m / Focus (HF) (automatic/manual) day/night setting auto/manual, speed adjustable
- Power supply: built-in rechargeable battery with charging control, port for main connection 220 V, car main connection 12 V
- Display: 12" TFT with built-in loudspeaker. 15" available upon request
- Antenna: antenna for car with window clip and external antenna
- Miscellaneous: external video recorder port available (see **PKI** digital recorder) Digital encrypting systems are available upon request.

**PKI 5595****Audio / Video Transmitter / Receiver Surveillance Case**

This professional set of surveillance cases consists of a transmitter case with pivot point camera, a receiver case with telemetric control and a built-in A/V digital recorder. The transmitter case transmits pictures either taken by the built-in mini camera or by the included pivot point camera. Further "highlights" of the **PKI** Audio/Video Transmitter/Receiver Surveillance Case are adjustable transmission power and connectable encryption. The received pictures are shown on the high-definition TFT-display of the receiver case and can immediately be recorded by the built-in A/V digital recorder. At the same time signals can be received from various sources and analysed on different displays. The built-in telemetric control of the receiver case allows control of 2 different cameras.

**Specifications:****Transmitter case:**

- Dimensions: 550 x 370 x 230 mm
- Weight: 18 kg
- Frequency: 1.4 GHz, 2,3 GHz, 2,4 GHz, 5,8 GHz, further frequencies upon request
- Channel switch with analogue display, video image inverting

- Transmitting power: adjustable

**Receiver case:**

- Dimensions: 550 x 370 x 230 mm
- Weight: 21 kg
- TFT-Displays: 1 x 12" and 2 x 5,6" TFT incl. loudspeaker
- Frequency: 1.4 GHz, 2,3 GHz, 2,4 GHz, 5,8GHz, further frequencies upon request
- Channel switch with analogue display, video

level control, video image inverting, switching channel output

- Telemetric Transmitter: Joystick / 200m / focus (auto /manual) day/night switch (auto/manual), frequency: 868 MHz, transmission power 25-500 mW
- Miscellaneous: 2 separate A/V receiver
- Power supply: built-in rechargeable battery with charger control, mains connection 220V or car mains 12 V



## PKI 5600

### 24 GHz Audio Video Directional Transmission System 1

This newly developed directional transmission system allows transmission of audio, video and switch signals via the 24 GHz-ISM frequency range, which is register and cost-free. The use of directional antennas reduces its interference response coming from other systems and increases safety from interception. The **PKI 5600** covers a range of up to 5 km at a transmission power of 100 mW. Also available are similar devices only for export purposes with 1 W, 10 W and 50 W and up to 50 km transmission range. All cameras out of the PKI product range can be connected to the transmission system and the receiving system is compatible with all our TFT colour displays and video recorders.



#### Specifications:

##### Transmission system

- Video input: 1 Vss / 75 Ohm
- Video frequency range: 30 Hz - 5 MHz
- Audio input: 100 mVss - 10 Vss
- Audio frequency range: 30 Hz-15 kHz
- Modulation: F3F
- Power supply: 9 - 30 V
- Power consumption: max. 500 mA/12 V
- Antenna: 36 dB parabolic antenna
- Dimensions incl. antenna: 500 x 500 x 400 mm

- Protection against dust/moisture: IP 65
- Operation temperature: -25° to +55°C
- Transmission power: 100 mW

##### Receiving system

- Frequency range: ISM 24.020-24.230 GHz
- Channels: 16 channels
- Video output: 1 Vss / 75W<sub>+</sub>
- Video frequency range: 30 Hz - 5 MHz
- Audio output: 500 mVeff to > 1 kW<sub>+</sub>

- Audio frequency range: 30 Hz - 15 kHz
- Receiver response: -85 dBm
- Modulation: F3F
- Switching channel output: 15 V / 100 mA
- Power supply: 9-30 V
- Power consumption: max. 250 mA at 12V
- Operation temperature: -25°C to +55°C
- Dimensions incl. parabolic antenna: 500 x 500 x 400 mm

## PKI 5605

### Microwave Radio Transmission

This system comprises one transmitting and one receiving unit at a frequency range of 10,5 GHz including parabolic antennas. It allows transmissions of audio, video and switch signals. At 10W output power a range of max. 50 km can be achieved. Should this be insufficient cascading is possible, i.e. to overcome larger obstacles (mountains, buildings etc.) or to get longer distances several radio systems can be switched in series.

#### Specifications:

- Frequency: 10.5 GHz
- Output power: 0,1 / 0,5 / 1 / 2 / 5 / 10 W
- Topology: PTP & PTMP
- Digital line Interface: E1 / Ethernet
- Encryption: AES (WPA2 – PSK)
- Dish & Grid & Panel directional: high gain
- Dimension: 39,2 x 31 x 15,6 cms  
Antenna Ø 35,5 cm
- Weight: 6,8 kg
- Temperature: -30° to +60°C
- Housing: IP 68
- Power supply: 110 / 220 V AC



## PKI 5610

### Digital AV Encryption System

In professional use you shouldn't miss audio/video encryption when using wireless directional transmitters. With our encryption system you can focus 2 audio channels with 1 video channel. This is especially important if you need to secure surveillance links. The system embeds digital audio data within the video's vertical blanking period. The data is encrypted under control of the **PKI** encryption algorithms resulting in a highly secure transmission.

#### Specifications:

- Scrambling method: encrypted digital audio sent as VBI data
- Audio input level: 10 mV to 4 Vpp, 100 kOhm

- Audio bandwidth:  
100 Hz to > 5 kHz dual channel  
100 Hz to > 10 kHz single channel
- Video input level: 1 Vpp 75 Ohm
- Digital sampling rate:  
8 bits at 22,5 MHz
- Video bandwidth: to 5.5 MHz
- Lock-in-time: < 0,5 sec. max.
- Video standards: PAL, NTSC
- Dimensions: 130 x 60 x 23 mm
- Operating temperature range:  
-10°C to +70°C
- Weight: 220 g
- Connectors: BNC
- DC power: 6 to 32 V DC, 800 mW



**PKI 5615**

## Camera with Motion Sensor

This camera is the response to the highest expectations in security needs. Everyone, who enters your premises, is captured by the motion sensor of this camera, which automatically activates a halogen spotlight and starts recording, whereas the recorded data is stored on the inserted memory card. Furthermore, the camera will pursuit the person by panning in an angle of up to 180°, depending on the direction of the person observed. Recorded data will be stored on the memory card, which is included in the set, and can be played back with any standard PC.

**Specifications:**

- Camera: CMOS sensor
- Recording: motion controlled
- Memory: 1 GB memory card
- Recording time: 560 x 20 sec. video films
- Power supply: DC 12 V power plug
- Spot light: 300W halogen, 220 V
- Dimensions: 280 x 150 x 100 mm
- Weight: 320 g
- 3 different announcements possible, that will be played back automatically via the integrated loudspeaker

**PKI 5620**

## Video Surveillance Helicopter

The **PKI** video surveillance helicopter is designed for all circumstances where no other methods of video surveillance are possible. For this reason, our **PKI** video surveillance helicopter is called "your eye in the sky". Equipped with a special camera and video transmitter it delivers the requested pictures. It is ideal for various application fields, for example in a soccer stadium (for observation of hooligans) at street riots (where political groups fight against each other) or at special police operations.

An assortment of components can be chosen individually according to requirements. Please find hereafter a choice of components.

**Specifications:****Microdrone set 4-200 ready-to-fly**

- Flight duration: approx. 20 min.
- Payload: 200 g
- Size: < 1 m Ø
- Power supply: 5V/1A
- Servo: 2 x standard
- Switch channel: 2 x 5V/16V
- Including: 1 FM-synthesizer transmitter 13-channel 35/40/41 MHz
- 3 x carbon blade, 370 mm (front and rear motor)
- 3 x carbon blade, 370 mm (left and right motor)
- 2 x LIPO batteries 4s, 14.8V, 2300 mAh
- 1 x peli case, dimensions 800 x 581 x 479 mm

**Base station set**

- 1 x 1.4 megapixel video eyeglasses
- 1 x 2.4 GHz 4-fold diversity receiver, high gain antenna
- 1 x internal power supply, inputs: 230/115VAC, 12/14.8VDC
- 1 x charger and true single cell balancer
- 1 x USB video frame grabber, video splitter 3x out
- 1 downlink decoder for receiving the complete machine state
- 2 x LIPO batteries 4s, 14.8V, 2300mAh

1 x peli case, dimensions 486 x 392 x 192 mm (notebook not included)

**Mobile Video Receiver**

- 2.4 Ghz 4-fold diversity receiver
- 1 x 1.4 megapixel video eyeglasses
- 1 x LIPO batteries 4s, 14.8V, 2300 mAh

**Video transmitter**

- 2.4 GHz analogue, 200 mW
- With this option the drone transmits the video and telemetry data to the base station/mobile video receiver

- Different cameras are available such as:
- Daylight Color video camera
- Low-light b/w video camera
- Still photography
- Videography

**GPS position hold**

- GPS-receiver and antenna
- 3D-magnetometer
- Firmware extension

**GPS waypoint navigation**

- This option allows the drone to follow a flight path, that can be planned or uploaded into its memory.

- LIPO batteries 4s, 14.8V, 2300 mAh

**LIPO Loader**

- With true single cell balancer
- Supply: 12VDC
- Max. load current: 3.1A



## PKI 5625

### Automatic Tracking Day/Night Camera with Microphone and Recorder

This newly developed security camera detects all moving persons and follows them full automatically. This is the important advantage compared with common cameras. Generally a camera only records a person passing by but this camera pans according to the movements of the persons. Due to the enlarged recording range more of their actions will be monitored. In addition to that, the integrated high sensitive microphone captures conversations from up to 10 m distance. Powerful IR-diodes allow night observation, whilst remaining completely invisible for human eyes.

#### Specifications:

- Power supply: 7,5 V DC by power adapter
- Output: Audio 1 x Cinch 1 Vss (600 ohm)  
Video 1x BNC 1Vss (75 ohm)
- Detection angle: 12°
- Camera range: 12 m
- Rotation speed: up to 3 m/sec.
- Relay output: NC, 50 mA/6V
- Power consumption: 300 mA
- Operating temperature: -10°C up to +50°C
- Dimensions: 82 x 139 x 57 mm
- Comes with: AV- cable, installation material, operating manual



## PKI 5635

### Number Plate Recognition Camera

This high speed camera captures every number plate of cars passing by at a speed of 60 fps (frames per second) completely independently from the illumination conditions. This is absolutely unnoticeable for drivers, as the IR illuminator works at an invisible 850 nm IR bandwidth with 2000 W light power. Effective range of number plate capturing is up to 15 meters. The **PKI 5635** is ideal for various applications, such as traffic surveys, vehicle access control, private car parkings, airports, harbours, law enforcement automation, transit traffic monitoring, vehicle entrance admission, speed enforcement, etc. The compatible software for data storage resp. filing can be offered upon request.

#### Specifications:

- Dimensions: 155 x 155 x 124 mm
- Weight: 3.2 kg
- Operation temperature: -20° to +50°C
- Power consumption: 24V AC / 20W

#### Digital IR-Camera

- Resolution: 752 x 480 pixels

- Image processing speed: 60 frames/sec at full image size
- Format: RAW, JPEG
- Shutter time: 1/100 to 1/30000 sec. adjustable gain
- Communication interface: Ethernet UDP/IP or USB
- Image sensor: High speed and ultra sensible, CMOS monochrome WideVGA
- Pixel size: 6 µm x 6 µm
- Dynamic range: up to 100 dB
- Miscellaneous:
  - built-in motion detection
  - Integrated flush memory
  - Real time clock
  - IP class 67



## PKI 5640

### Mini Pan/Tilt Mounting

This outstanding miniature pan/tilt system could fit in a cigarette box but professionally can compete with larger systems. Due to its small size PKI 5640 is ideal for perfect camouflage. All functions can be controlled by the wireless remote control. This system is designed for small and light zoom cameras.

#### Specifications:

- Dimensions: 85 x 55 x 25 mm
- Weight: 240 g
- Interface: RS 485
- Various: Mounting with mini zoom camera can be delivered upon request.



**PKI 5645**   **PKI 5650**

## AV Micro Recorder Camera, AV Micro Recorder Window Camera

**PKI 5645** is easy to camouflage at top-secret-actions. Due to the integrated voice control the recording does not start until beginning of a conversation and automatically stops at its end. Therefore a standby time of 260 hours is possible. Should this be insufficient you can use this technological miracle with an adapter and a remote control can be delivered on request.

**PKI 5650** is a real highlight by **PKI** Electronic Intelligence. Smaller and more inconspicuous is impossible! Just fix the **PKI 5650** with the special mastic material on the window. 1 Lux illumination is sufficient in order to obtain impeccable video recordings. Its outstanding resolution of 2 million pixels provides images of excellent quality. The camera records audio/video signals by means of built-in batteries up to 90 min. By using external power supply and an 8 GB micro SD card, the recording time can be extended to 320 min. The SD card can be exchanged from outside without removing **PKI 5650** from the window. This miniature miracle is predestined for top secret videos

### Specifications:

- Pixel: 2 million color CMOS
- View angle: 62°
- Battery capacity: 260 mAh
- Consumption current: 120 mA / 3,7 V (max.)
- Storage temperature: -20°C to +80°C
- Operating temperature: -10°C to +50°C
- Relative humidity: 15-85% RH
- Memory storage capacity: micro SD card (TF card)
- SD capability: max. 8 GB micro SD card
- Video function and format: JPEG, VGA 640x480@30 fps
- USB jack: USB 1.1 / 2.0
- Weight: 50 g approx.
- Dimension: 55 x 28 x 20 mm approx.
- Operation system: 2000 / XP / Vista 32
- Storage consumption: 1 GB per 40 min.
- Charging time: 2 h
- Standby time: 260 h
- Various: Suitable as web camera for online video chat. Comes with adapter, mounting, PC connecting cable, Micro SD 2 GB


**PKI 5655**

## Long Distance Day/ Night Camera with 360° Continuous Pan

This camera is especially designed for long distance observation. Equipped with a weather-proof and solid housing it is often used at airports, highways, harbours and seashores. Due to an integrated water tank and its windscreen wiper it always provides excellent visibility, independently from environmental conditions.

### Specifications:

#### Camera Specifications

- Sync System: Internal
- Image Sensor: 1/4" Exview HAD CCD
- Scan System: 2:1 Interlace
- Resolution: 470 TVL(C)/570TVL(M)
- Sensitivity: 0,01 Lux (1/4 sec. NTSC), 1/3 sec. PAL
- Lens aperture: auto/manual
- Focus: auto / manual
- Zoom Ratio: 432X (optical 36x, digital 12x)
- Focal Length: 3,4 mm - 122,4 mm
- View Angle: Wide 57,80° /Tele 1,70°
- BLC: close/auto
- White Balance: auto
- Gain control: auto
- Privacy Mask: 24
- Signal Format: PAL/NTSC
- S/N: ≥ 50 dB
- Video output: 1.0 +/- 0.2 Vp-p
- Video output port: female BNC

#### Connection type

- Interface: RS485/RS422, Bi-phase

#### Electrical specifications

- Input power: AC24V, AC220V, AC110V selectable, 50/60 Hz
- Max. power consumption: 60W
- Voltage for defroster, heater, fan: 24V AC
- Power consumption for defroster, heater, fan: 21W 4000V video, data, power lightning proof

### Functions

- OSD menu
- Scheduled various functions
- 220 presets with title
- 4 panning, 4 sequences, 4 patterns
- 8 zones with title
- 8 privacy masks
- Auto running function
- Temperature display
- 18x/22x/23x/30x/35x/36x optical zoom camera optional
- 9 language OSD menu (Chinese, English, French, Portuguese, Spanish, Italian, German, Russian, Polish)

### Weather-proof equipment

- Protection against dust/moisture: IP66
- Sun shield, auto running defroster/heater/fan/wiper
- Operating temperature: -40°C – 60°C
- Operating humidity: 0-90%
- Operating wind speed: 90 km/hour
- Wind speed resistance: 130 km/hour
- Resistance against rain: 4mm/min. With relay out for water jet control

### IR Specification

- Power supply: 100-240 VAC (outer)
- Power consumption: 10W



- IR output power: 20W
- IR emission angle: 15°
- IP optical wavelength: 850 nm
- Operating temperature: -40°C to +60°C
- Size: Ø 58 mm x 135 mm
- Weight: 300 g

## PKI 5660

### Mini Pan/Tilt Camera

This first class camera provides 18x optical and 12x digital zoom in day/night setting. This **PKI** Mini Pan/Tilt Camera, equipped with a resolution of 470 TV-lines and a sensitivity of 1 lux, is designed for use on tables or on ceilings. On special request this camera can be delivered in a weatherproof covering. Besides various different functions it is possible to preset 6 positions which later can be recalled automatically at the touch of a button. All functions can be triggered wirelessly through our telemetric control (see **PKI** surveillance case).

#### Specifications:

- Dimensions: Ø 15,5 x 19,5 cm
- Weight: 2,4 kg
- Power supply: 12V power adapter
- Resolution: 470 TV-lines
- Min. illumination: 1 Lux



## PKI 5665

### Microwave Surveillance Solution

Audio and Video surveillance is necessary and required everywhere. In the **PKI** product range you will find complete net work systems including antenna and transmitter/receiver. The systems are designed to be cascading, so that they can achieve a range of more than 1000 km according to installed number of systems.

#### Specifications:

- Frequency: 140 MHz - 10,5 GHz
- Output Power: 0,1 - 100 W
- Digital line interface: E1 / Ethernet
- Encryption: AES (WPA2-PSK)
- Antenna: high gain
- Dimension: 355 x 445 x 238 mm
- Weight: 4-7 kg
- Operation temperature: -30° - +60°C
- Protection against dust/moisture: IP 68
- Power supply: 110/220 V AC
- Solar: optional for low power
- Format: PAL / NTSC
- Bit rate: 32 kb/s – 4Mb/s
- Resolution: D1 size (720x480)
- Compression: Video MPEG 4  
Audio ADPCM



## PKI 5710

### Indoor/Outdoor Video Camera with Automatic Recording for Day and Night

Digital video observation is what you need. With this **PKI 5710** "blackbox" you will just have what you are expecting, perfect pictures and reliable performance around the clock. It is a must for every government department and an indispensable tool for recognition of criminal acts and manipulations. It is the only camera which combines a standard white-light flash, an IR-flash for night-vision function and a motion detector in one small housing. The built-in 2.1 Mio pixels camera provides pictures of extraordinary quality and most reliable capacity around the clock. **PKI 5710** fully automatically stores relevant pictures by day and night together with date and time indication (being of most importance for evidence collecting). Single pictures as well as video recordings of 15

seconds are possible and will be stored on the 32 MB SD-card (included in the set). This card, if necessary, can be exchanged against other types of higher capacity.

#### Specifications:

- Dimensions: 180 x 100 x 40 mm
- Weight: 320 g
- Power Supply: 4 x 1,5 V Battery, type AA
- Distance of IR-flashlight: approx. 10 m
- Detection range of motion: Detector approx. 30 m
- Adjustments: 3 picture delay, incident-counter



**PKI 5715**

## Window Camera

The **PKI 5715** has been designed as a miniature, colour camera with a wireless transmitter and optional receiver. It is really the best choice for visual room observation from outside, if a permanent presence of the observer is not possible but still he must be informed of what happens in a closed room. Due to its very small dimensions and low weight, the **PKI 5715** is hardly perceptible. When fixed at the edge of the window pane (with our supplied special adhesive material), this wireless miniature colour camera provides a direct view into a room even under low light conditions (min. 1 Lux) for the observation of all activities inside the room. Because of the built-in video transmitter such surveillance can be effected from a distance of several hundred meters (depending on

surrounding conditions). As a receiving station we recommend our **PKI 5755** receiver with display, play-back and recording function.

**Specifications:**

- Camera: 1/3" CMOS Chip
- Resolution: 380 TV-lines, colour, 628 x 582 pixel
- Min. illumination: 1 Lux
- Objective: 3.6 mm wide-angle
- Power supply: Lithium rechargeable battery with mains adapter/charger
- Transmitting distance: up to 50 m
- Dimensions: approx. 22 x 22 x 24 mm - incl. transmitter
- Weight: approx. 30 g
- Recommended receiver: **PKI 5755**

**PKI 5720 PKI 5725 PKI 5730**

## Cameras, Receiver and Recorder

Our micro cameras with extraordinary high resolution can be connected to our pocket transmitters or directly to one of our digital recorders. Even the weakest video signal created by a small video transmitter will be captured by the corresponding receiver. Indispensable for any kind of disguised video surveillance.

**Specifications:**

For all application fields - even in disguised operation - we offer the right choice of PCB cameras in b/w or colour with the following features:

- smallest dimensions from 24x24x27 mm for **PKI 5720** - 1/3" CMOS b/w camera, with 1:2,0 / 3.6mm objective via 26x22x24 mm for **PKI 5730** - 1/3" CCD colour

camera with 3,6mm pinholeobjective disguised as normal button up to 31x31x28 mm for **PKI 5725** - 1/3" CMOS colour camera with 1:2,0 / 7,8 mm objective.

- Other types and objectiveconfigurations are available on request
- CMOS or CCD-chips of latest technology made by world-wide known manufacturers
- Fully battery operated at 12 VDC with approx. 30-40 mA power consumption

**PKI 5735**

## Miniature Day/Night Camera

For disguised observations under low light conditions, whether in dark rooms or outside at low daylight or even at night, the **PKI 5735** is the right choice for every government related agency. With its minimum illumination sensitivity of only 0,0003 Lux, and the extremely high resolution of 600 horizontal TV-lines, this camera provides incredible clear b/w pictures which helps to identify a person, a car number plate or even a small suspicious parcel, which may be a postal bomb laid down in front of a sensitive area. For all such purposes a camera has to be suitable in size and weight. With its very small size of approx. 20 x 20 x 18 mm and the minimal objective opening of only 1,4 mm the **PKI 5735** is ideal for disguised mounting at any place. It either can be powered by 12 VDC

rechargeable batteries or via the supplied mains adapter. Other miniature cameras with microphone and/or colour recording are available on request

**Specifications:**

- Power supply: 12 VDC with external mains adapter
- Resolution: 600 horizontal TV-lines
- Min. illumination: 0,0003 Lux
- Backlight adjustment: automatic
- Objective: Pinhole 4,3 mm (78°)
- Dimensions: approx. 20 x 20 x 18 mm
- Weight: approx. 35 g





## PKI 5740

### GSM Audio / Video Transmission Set

This set consists of a central unit, a pocket PC, a laptop with receiver and an audio/video camera. The central unit is equipped with a SIM-card as well as the necessary sockets for power supply and audio/video connection. The integrated GSM-transmitter, by call, transfers the audio and video signals worldwide to the observer. Thus, observations can be effected without being at site, i.e. just the audio/video camera has to be placed in the room and the monitoring can be done from any location around the world. Additionally, and as an option, the camera can be equipped with infrared diodes for observations at night. Upon request, the **PKI 5740** can be modified for operations on landline telephone systems. Please contact us for further information



#### Specifications:

- Resolution:
  - 704 x 288 pixel (half-size picture)
  - 352 x 288 pixel CIF
  - 176 x 144 pixel QCIF
  - 128 x 96 pixel SQCIF
- Picture transmission:
  - 1-3 pictures per second via GSM at 9,6 kbps

- Power supply: 12 VDC mains adapter, 10 W
- Software:
  - Windows compatible software with storage, 24 hours, approx. 120 MB, video player software
- Dimensions: approx. 120 x 140 x 35 mm
- Weight: approx. 320 g

## PKI 5745

### Wireless Audio / Video Camera

This complete set is a special assembly of several first-class components for disguised operations with body worn audio and video observation devices. The **PKI 5745** consists of a miniature colour camera, a pocket-sized transmitter and a corresponding receiver with built-in TFT-display and digital recorder. The camera objective is camouflaged with an ordinary button suitable for every kind of clothing. Special types of buttons are available upon request. Optionally, this set can be supplied with a body-worn digital A/V recorder instead of the wireless link.

#### Specifications:

##### A) Colour Video Camera

- Horizontal resolution: 420 TV-lines, colour
- Min. illumination: 0,5 Lux
- Backlight adjustment: automatic

- White balance: automatic
- Power supply:
  - 12 VDC either from transmitter or recorder
- Dimensions: approx. 25 x 25 x 20 mm
- Weight: approx. 32 g
- B) A/V Transmitter
  - Frequency: 1.2 GHz
  - Output power: 1 Watt
  - Operating distance:
    - approx. 200 to 700 m, depending on surrounding conditions
- Power supply:
  - Li-Ion rechargeable battery charger/mains adapter
- Operating time:
  - approx. 2 hours with fully charged batteries
  - Extended operating time possible by means of external batteries.



- Dimensions: approx. 50 x 28 x 8 cm
- Weight approx. 200 g
- C) A/V Receiver see **PKI 5755**
- D) A/V Digital Pocket Recorder see **PKI 2460** - as option

## PKI 5750

### Wireless Audio / Video System Disguised in Smoke Detector

The **PKI 5750** - wireless audio/video system disguised in a smoke detector offers the best choice for camouflaged observation in office environments and other rooms where unobtrusive surveillance is required. With the self-adhesive tape the smoke detector camera can be fixed within seconds and at any place without any installation tools. The built-in camera can be positioned to any required direction and the integrated transmitter covers a range of approx. 200 m for a clear sound and picture reception. Depending on customer's requirements various combinations are available:

- either b/w or colour cameras
- transmitters in different frequency ranges 1.3, 2.3 or 5.8 GHz
- transmitters with different output power - 10 mW to 200 mW (Every other type is available on request)

#### Specifications:

##### A) B/W Camera

- TV-Lines: min. 420
- Min. Illumination: 0.05 Lux
- Built-in Lens: F = 3.6 mm

##### B) Colour Camera

- TV-Lines: min. 380
- Min. Illumination: 0.25 Lux
- Built-in Lens: F = 4.3 mm

##### C) A/V Transmitter

- Frequency Ranges: 1.3, 2.3 and 5.8 GHz
- Output Power: 200, 25, 10 mW

##### D) Housing

- Height: approx. 60 mm
- Diameter: approx. 125 mm
- Weight: approx. 120 gr.

##### E) LCD Pocket Receiver

- Screen Size: 50 mm
- Dimensions: 60 x 120 x 35 mm
- Power supply: standard batteries



- Black/white or colour transmission
- Up to 4 hours operation time
- Selectable transmission channels
- Integrated microphone
- Portable pocket receiver

**PKI 5755**

## Audio Video Receiver & Recorder

Wireless video cameras quickly and easily can be installed anywhere.

The combination with our **PKI 5755** A/V Receiver and Recorder provides a complete surveillance system with utmost flexibility. For mobile operations, this pocket-sized device offers direct play-back on the built-in TFT-display plus digital recording in real-time. A larger display can be connected via the A/V outlet sockets. The integrated 30 GB hard disc records the signals with approx. 65 minutes per 1 GB, i.e. the total recording time is up to 30 hours. An additional SDcard slot is integrated for cards up to 4 GB. Furthermore the device is equipped with an integrated motion detector which will only start recording when there is a movement in the observed area. All necessary A/V RCA and USB-cables, headphones and carrying bag are included.

**Specifications:**

- Receiving frequency: 1,2 or 2,4 GHz range
- Receiving channels: 4
- Antenna: omnidirectional
- Resolution: 720 x 480 pixel
- Recording: audio and video digitally on 30 GB hard disc in real-time.
- Connectors: A/V-in, A/V-out, external power supply
- Power supply: Li-Ion rechargeable battery, 7,4 VDC, 1800 mAh with external charger/mains adapter.
- Dimensions: approx. 130 x 80 x 25 mm
- Weight: approx. 250 g
- Remarks: motion operated recording (slow-motion-detection)


**PKI 5760**

## Pinhole and Fibrescope Objectives

Wherever video observations through very small openings are required, the **PKI 5760** provides the perfect solution. Camouflaged in products of daily use, looking through key-holes or small holes drilled through a wall - our range of special pinhole objectives offer the most suitable possibilities. You have your camcorder and we have the perfect solution for all your purposes. On the other side, camcorders of latest generation are also included in our product range. With this latest generation and state-of-the-art products, sharp and clear pictures of high resolution are guaranteed. Each lens/fibrescope can be connected with nearly every camcorder and/ or CCDcamera with 12 mm thread or C/CS mount by means of the supplied adapters. Direct

observation without camera or camcorder is also possible.

**Specifications:**
**A) Fibrescope**

- Length: 100 cm
- Diameter of fibre: 2,0 mm
- Diameter of objective: 3,5 mm
- Number of glass-fibres: 10.000
- Adapters different types included to fit to nearly every commercial camcorder

**B) Pinhole Objectives**

- Focal range: available in 6, 10, 15 and 30 mm
- Mount: 12 mm or C/CS-mount


**PKI 5770**

## Full Band Video Scanner

Nowadays night and day observation cameras are installed everywhere, sometimes they are even equipped with microphones. They transmit signals of multiple frequency ranges from 1,2 GHz up to 5,8 GHz. In order to detect and display these hidden wireless cameras we have developed our **PKI 5770** Full Band Video Scanner which scans 1,2 GHz, 2,4 GHz and 5,8 GHz frequency bands synchronously within 30 seconds up to a distance of 100 m. It is equipped with NTSC or PAL/SECAM for identification of detected video signals. By means of the STOP/SCAN button the image can be latched or released. The speaker will display the voice if there is an audio signal with the wireless camera signal. **PKI 5770** offers 3 STOP/SCAN buttons for each frequency band and video system indicator. Furthermore it provides 3 Audio/Video outputs for recording of signals from 3 frequency bands at the same time.

**Specifications:**

- Detecting frequency: 1.2 GHz, 2.4 GHz, 5.8 GHz
- Display: 3.5" high resolution LCD, color and b/w camera compatible
- Scan indication 1: NTSC or PAL/SECAM video format
- Scan indication 2: scanning LED indication x 3 for 3 frequency bands
- Warning mode: acoustic and silent detection through earphone
- Scanning band: 1.2 GHz, 2.4 GHz, 5.8 GHz
- Monitor display: auto band switching Band selection switch for manual band change
- Audio/video output: 3 AV outputs for 3 bands synchronous recording
- With 3.5 mm Video/Audio output jack x 3 (for recording)
- Detecting distance: up to 100 m (depending on output power of source transmitter)
- Power: switching power adaptor, built-in rechargeable battery



- Battery life: about 40 min. after full charge
- Dimension: 19 x 14 x 4 cm (antenna length not included)
- Weight: 860 g incl. rechargeable battery

## PKI 5775

### Universal - Receiver - Display - Recorder

This universal pocket device beats all records with its measures of only 70 x 120 x 20 mm and its light weight of only 180 g. The **PKI 5775** is the control center of most surveillance operations. Transmissions of both systems, wireless or cabled cameras, can be received. Play-back via the integrated 2.5" TFT display. But there is even more to it than that. All audio and video signals can be stored onto the internal memory card and displayed either on the internal LCD-display or on external devices, such as PC or TV set. Recording time depends on the memory card used and varies up to 4.5 hours. As it is equipped with a foldable foot, it can be used as tabletop unit as well.

#### Specifications:

##### Wireless receiver:

- 4 receiving channels:  
CH1: 2414 MHz; CH2: 2432 MHz,  
CH3: 2450 MHz; CH4: 2468 MHz
- D6 level: - 90dB

##### Video:

- Frequency range: PM 2.4 MHz
- Display: 2.5 TFT LCD 882x228 transactive LCD
- Video system: MTSC/PAL
- Resolution: 640x480 / 320x240
- Video format: MPEG-AVI max. 30 fps
- Data format for play-back: MPEG-1/MPEG 4/AVI/ASP/ADPCM

##### Audio:

- Frequency range: 20Hz-20 KHz
- Play-back: stereo
- Audio format: MP3 / MP 2.5
- Loudspeaker: 1 W

##### Pictures:

- Data format: JPG/JPEG
- Memory: flash memory 64 mB
- Memory card: SD / MMC / SX / U-disc / HDD
- Supported systems: IBM-PC: Windows 98SE, ME, 2000, XP
- Interface: USB 2.0, USB OTG 1.1
- Disc format: FAT 32
- Language: English



##### Power supply:

- Power plug: DC 5V / 2 A or
- Li-ion rechargeable battery 2500 mAh
- Operation time: > 4.5 h in stand-by mode / > 7 h in active mode

## PKI 5780

### Audio Video Recorder with Integrated Camera and Display in a Cigarette Packet

Another "HIGHLIGHT" in our product range. Disguised in a common cigarette packet, the **PKI 5780** is a complete audio/video recorder with integrated camera and display. If the integrated motion detector is turned on, the recording only starts when the picture is moving, allowing long term monitoring. Even in total darkness you can effect recordings at a 5 m distance due to the integrated IR-diodes. The **PKI 5780** is equipped with all necessary in- and output jacks, giving the possibility to connect an external camera or to copy the recorded files to a PC or TV set. All recordings are saved on a standard SD-memory card that can easily be changed. Of special advantage is the remote control, which is included in the set.

#### Specifications:

- Video: NTSC/PAL system
- Codec: MPEG4-SP ASF data format
- Recording: 1,2,° max. fps selectable max. 30 fpsa 320x240 / 12 fpsa 640x480
- Recording quality: low /medium /high
- Recording time/date: overlay in video recordings as ASF-file
- Input: 1 channel video signal
- Output: 1 channel video signal
- Audio: frequency 44.1 KHz codec G726/32 kbps
- Input: 1 channel audio signal
- Output: 1 channel audio signal
- Audio-unit: microphone, loudspeaker, earphones
- Memory: SD card (FAT 16/32) max. no. of files: 16384
- Connection: USB 1.1 (read only)
- Recording: manual / programmable
- Play-back functions: Play-back/



- fast forward /fast rewind, pause, 1 forward, 1 rewind
- Play back speed: x1/x2/x4/x8/x16x/32
- Power consumption: DC 5V /1 A, Li-Ion rechargeable batteries
- Battery life: Li-Ion rechargeable batterie 100 min.
- Weight: 150 g (w/o battery) 175 g (incl. battery)
- Dimensions: 86 mm x 55 mm x 22,5 mm
- Operating conditions: 30 – 80 % rh, 5° - 45° C (41° F - 113° F)

- Storage conditions: 30 – 90 % rh, 0° - 50° C (32° - 122° F)
- Additional functions: CMOS sensor 1/6" CMOS sensor Image VGA (H/V 40 x 480) S/N ratio 46 dB
- Lens: conical lens f3.62 mm/F2.8
- Infrared luminosity: 6x IR LED
- Infrared wave length: 850 nm
- Infrared range: 5 m LCD 2.5" colour TFT-LCD
- Remote control: 2.4 GHz



**PKI 5785**

## Wireless Audio/Video Transmitter Ball

There are of course different possibilities to gain access to the object to be observed. However, in some cases there might be a high wall or security personnel or even other circumstances which prevent you from entering certain premises in order to install corresponding surveillance devices. In this case we recommend the **PKI 5785**, because this Hi-tech ball is a relatively simple equipment. The lower half of the transmitter ball is 4 times heavier than the upper half. Because of the gravity the heavy lower half always remains on the ground. The upper half is provided with 3 video cameras with pinhole lenses at an angle of 110°. This guarantees that always a picture is transmitted from the desired direction. This of course also applies for the built-in directional microphones. The built-in audio/video transmitter with 4 channels transfer the signals to the LCD monitor delivered with the

**PKI 5785** within a frequency range of approx. 5,8 Ghz. up to a distance of approx. 200m and continuously up to 3 hours. Optionally we can also offer an additional remote control in order to activate the transmitter ball only if required and such enabling observations for several weeks.

**Specifications:****Camera:**

- TV-lines Min. 420
- Illumination Min. 1 Lux
- Built-in lens 3,6 mm
- Focal aperture F = 2,0 mm 110°

**A/V Transmitter:**

- Frequency range 5,650 – 5,950 GHz
- Channels 4
- Output Power 25 mW
- Power supply Rechargeable battery

**PKI 5790**

## Miniature Video Repeater

Small-sized video cameras with integrated transmitters only have a limited transmission range. Wherever larger distances to receiving points have to be covered, it is necessary to use a repeater-station. Our **PKI 5790** is the right solution for such applications. It receives the standard video signal within the 1.2 GHz range and transfers this into the 2.4 GHz range. With its max. output power of 4 Watts and the 18 dbi directional Yagi-antenna, a max. distance of up to 20 km (depending on surrounding conditions) is possible. **PKI 5790** especially has been developed for disguised purposes, and its smallest dimensions are perfect for any mobile operation. Power supply of the **PKI 5790** is provided by a separate 12 V rechargeable battery and/or mains adapter/charger. For the reception of the signals we recommend our **PKI 5755** A/V-Receiver/Recorder.

**Specifications:**

- incoming: - 1.2 GHz-range
- outgoing: - 2.4 GHz-range (other frequencies - like 1.3 GHz to 2.6 GHz - are available upon request)
- Max. transmission range: up to 20 km (depending on surrounding conditions)
- Max. output power: up to 4 Watts
- Antenna Directional: Yagi-Antenna, 18 dbi gain
- Power supply: 12 VDC rechargeable battery and/or mains adapter/charger
- Dimensions: approx. 135 x 60 x 40 mm
- Weight: approx. 400 g

**PKI 5795**

## Audio / Video Scanner

With the **PKI 5795** every audio and video signal within the frequency range of 900 to 2520 MHz can be received. Automatic scan mode allows easy localisation, but manual scan is also possible. In both modes, disguised wireless cameras can be found and the received signals will be transmitted to the integrated LCD-monitor and speaker. Of course the **PKI 5795** can not only be used for detection purposes, but is also a versatile tool for a mobile observation system by just combining one of our small wireless cameras with this scanner. Optionally an external directional antenna can be connected for achieving larger ranges.

**Specifications:**

- Dimensions: approx. 120 x 70 x 35 mm
- Weight: approx. 320 g
- Power supply: 4 x 1,5 V battery, Type AA, or mains adapter
- Display: integrated LCD display, 2,5"
- Accessories: 1 x RCA connecting cable, mains adapter 5 VDC, external directional antenna SMA (optional)
- Frequency range: 900 - 2520 MHz
- Video signals: PAL / NTSC
- Connections: Video-out socket  
Power-in socket  
Antenna socket





## PKI 5800

### AV Night Vision Set

This high-tech A/V system developed by **PKI** exceeds everything that might be available on the market so far. The reasons for this are very simple:

- 1) no low light amplifier (poor video resolution and expensive)
- 2) no laser (dangerous for the eyes)
- 3) weight (portable device too heavy)

**PKI 5800** is equipped with a high-resolution camera connected to an IR-hybrid illuminator for night vision. This handheld device with integrated directional microphone allows observation at day and night up to 200 m distance at the highest possible resolution. Several ways of processing of the audio/video signals are possible, such as immediate recording, wired transmission to our A/V goggles or wireless transmission to further external devices. All kind of monitors are connectable. This outstanding combination enables every policeman to survey and control the relevant situation. Due to security reasons **PKI 5800** should be available at every surveillance operation of customs, police or border patrols.

#### Specifications:

- Dimensions: 170 x 200 x 55 mm
- Weight: 2.8 kg
- Power supply: 12 V DC L-ion battery

#### Camera

- Resolution: 550 TV lines
- Sensitivity: 1 Lux (0 Lux IR)
- Lens: 50 mm (F2.0)
- Opening angle: 5°

#### Directional microphone

- Amplifier: 10.000 x
- Frequency: 20 Hz – 16 kHz (-3dB)
- High-low pass filter: fg= 150 Hz / 5kHz

#### IR-hybrid illuminator

- Range: 200 m, at 0 Lux darkness
- Power consumption: 60W
- IR radiation angle: 20°
- Shelf-life: more than 10 years

#### A/V goggle

- Dimensions: 180 x 190 x 35 mm
- Weight: 90 g
- Power supply: 1000 mA L-ion battery
- Power consumption: less than 1,1 W
- Battery life: 3-4 hours
- Video signal: NTSC/PAL/SECAM automatic selection

- Display: 2 TFT LCD Displays
- Color depth: 24 Bit Input
- Image input: composite AV
- Image size: 80" screen (1 m far)
- Resolution: 640 x 480 (920 k Pixels)
- Audio: double-channel stereo
- Viewing angle: 35° (diagonal)

#### Wireless transmitter/receiver

- Range: 300 m in open spaces
- Dimensions: 43 x 28 x 16 mm
- Frequency: GHz-range, 4 channels
- Weight: 25 g
- Power supply: Li-ion rechargeable battery 6V
- Various: Reception by various persons (according to number of AV-goggles) is possible by using the wireless version.



## PKI 5805

## PKI 5810

### Video Pen, Video Glasses, Series of Disguised Video Cameras

This series of different video systems especially is designed for undercover observations. Without arising any suspicion security guards, agents or safety personnel can walk through crowds, join important meetings/ events and observe or record participants in every situation. Products of daily use are combined with a micro CCD-camera available either in b/w or colour. Each type can be connected to an existing portable video recorder which can be fixed to the belt or in the pocket. Optionally **PKI ELECTRONIC INTELLIGENCE** can provide a video transmitter / receiver set and digital recorder for wireless transmissions and recording. The disguised cameras are available as: **PKI 5805** - Video Pen b/w or colour, **PKI 5810** - Video Glasses b/w or colour

#### Specifications:

- Image sensor: Inter-Line type CCD
- Scanning system: 2:1 Interlace
- Horizontal Resolution:
  - PKI 5810** better than 350 TV lines,
  - PKI 5805/PKI 5815** better than 330 TV lines
- Pixels:
  - PKI 5810** - 500 x 582
  - PKI 5805** - 512 x 492

- Synchronisation: Internal
- Gain control: AGC ON 24dB, OFF 18 dB
- Electronic iris: Selectable 1/50 to 1/30.000 sec
- Lens: 3.6 mm
- Min. illumination:
  - B/W: 0.6 lux (f 1.4, AGC ON 50%)
  - Colour: 1.4 lux (f 1.4, AGC ON 50%)
- Power consumption: 30 - 150 mA at 5 VDC

- Concealed video observation
- High quality and performance
- B/W or Colour systems available
- Gain control AGC high / 24 dB
- Lightweight and robust
- Optional digital recorder and video transmitter/receiver



**PKI 5815**

## Miniature Repeater

A Repeater is recommended if you need to extend the transmission range of a wireless camera. The **PKI 5815** captures the camera signals at a distance of 10 to 100 m, amplifies them and afterwards transmits them to the final receiving device. Very useful at longer distances, as it doubles the transmission range.

**Specifications:**

- Frequency: 2.4 GHz range
- Channels: 4 selectable channels
- Power supply: external power plug
- Weight: 200 g
- Dimensions: 150 x 40 x 20 mm
- Complies with FCC/CE regulations

**PKI 5820**

## Video System in Mobile Phone Housing

During meetings, conversations and in special occasions it is necessary to have a proof of the participants. For this a video observation is the best possible way, but in many cases it is impossible or not workable to install a fixed camera system. Therefore a mobile and camouflaged system is a good alternative. **PKI 5820** is a completely disguised video system for unobtrusive operations built in a standard mobile phone housing. Consisting of a CCD-miniature camera, a video transmitter and power supply it should be used wherever installation of standard cameras is impossible. Just switch it on, put it at a suitable place and you will have perfect reception at highest quality. Installation of a complete video surveillance cannot be more simple, faster and easier than with the **PKI 5820**.

**Specifications:**

- Extremely small 1.25 GHz video transmitter with 1/4" b/w or colour CCD miniature video camera in a GSM-phone housing
- B/W-camera with 350 TV lines and 3.8mm lens F=2.0
- 100 mW transmitter output power
- FM modulation / 30 MHz bandwidth
- 70 mA transmitter power consumption
- 6-9V DC internal battery operation
- Dimensions: Standard mobile phone

**PKI 5825 PKI 5830 PKI 5835 PKI 5840**

## Series of Camouflaged Video Cameras

Camouflaged cameras are very often required for disguised observation tasks. This set should be the minimum to be with every government department. Local environments and the surroundings determine the type of camera system to be used. For every purpose this set offers the right solution, i.e. if an indoor observation has to be effected at residential premises, the wall clock camera or camera in a loudspeaker should be used. For outdoor observations the camera in a motion detector or in a steel housing are applicable. Other types of camouflaging our camera systems are available upon request. Whatever you need, we can do it. Wireless versions with built-in transmitter and the according receiver are, of course, also available for each kind of the camouflaged cameras.

**Specifications:**

Various items of daily use equipped with 1/3" CCD-chip cameras, 380 TV-lines, 3 lux minimum

illumination and built-in microphone. Each with 9-12 V DC battery operation and full operation of the original item as it is

- **PKI 5825** Camera in motiondetector
- **PKI 5830** Camera in wall clock

- **PKI 5835** Outdoor camera in steel housing
- **PKI 5840** Camera in loudspeaker
- Please contact us for full information of each item



## PKI 5845

### Digital Network Camera

Whether via local network, Internet or mobile phone, with the **PKI 5845** Digital Network Camera you are always informed about things happening in areas to be observed. Just switch it on and you will receive a brilliant sharp picture with a high resolution of 640 x 480 pixels. Due to the RTSP protocol, it is possible to receive the recorded data either on your mobile phone or on a PC. The set includes a complete software package for real-time recording of up to 16 **PKI 5845** Digital Network Cameras or security video servers, as well as software for play-back and further analysis. Optionally the camera can be supplied with Ethernet-connection or fitted for a wireless LAN network

#### Specifications:

- Camera: 1/4" high quality CMOS sensor
- Min. illumination: 1,5 Lux
- Objective: 4 mm, wide-angle, F=2,0
- Backlight: automatic compensation
- Resolution: 640 x 480 pixel
- Features electronic: shutter (ELC) automatic white balance (AWB) automatic amplification regulation (AGC) browser for Internet explorer integrated microphone protocols: TCP/IP, HTTP, FTP, SMTP, NTP, DHCP, DDNS, RTSP. automatic indication of date and time LAN-network as option
- Dimensions: approx. 115 x 75 x 35 mm
- Weight: approx. 220 g



## PKI 5850

### Digital Miniature Flash Memory Video Recorder

The **PKI 5850** is a Video and Audio recorder for videos with full TV frame rate and resolution and integrated microphone pre-amplifiers for 2 microphones. Its small size plus exchangeable and rechargeable battery especially are suitable for tasks where covert recordings are necessary. The recorder is based on MPEG-2 data compression on 1 GB standard compact flash card with a recording time of up to 110 minutes.

#### Specifications:

- Video: PAL/NTSC with full TV resolution and 25/30 frames
- Audio microphone input: (stereo)
- Encoding: MPEG-2 MP@ML for Video and MPEG-1 Layer 2 for Audio, additional scrambling
- Storage media: Compact Flash Card Type I or II
- Power supply:

LI-Ion battery with 700 mAh for 75 min or 1400 mAh for 150 min or unlimited via mains adapter

- Interfaces: USB 1.1 interface (device) up to 12 MBit/s, audio/video input, remote
- Camera power supply: 5 V, ≤ 200 mA
- Status indication: LED for operating mode, system error, battery status, memory status
- Dimensions: 130 x 80 x 22 mm

- Small size for covert applications
- Video recording in PAL/NTSC format
- MPEG-2 data compression
- on standard compact flash card
- Recording time up to 110 Minutes



## PKI 5855

## PKI 5860

## PKI 5865

### Audio / Video Cellular Monitoring

**PKI 5855** assembly module

**PKI 5860** built-in motion detector

**PKI 5865** recording camera

This is the latest technology at the moment. Easy to install, it does not need any special configuration. Control has never been so easy as nowadays and is possible within seconds worldwide. A common UMTS/3G mobile phone is sufficient for activation and receipt. **PKI 5855** is as small as a cigarette box and can unobtrusively be installed everywhere. **PKI 5860** is a common, full functional motion detector and offers perfect camouflage. **PKI 5865** is designed for day and night observation and all activities recorded during your absence are stored on its integrated memory. Later they can be recalled at any time from every place you are worldwide. For operation of this unit an activated SIM-card is necessary.





## Audio / Video Cellular Monitoring

### Specifications:

#### PKI 5855

- Power supply: power adapter 6V DC / 100-240 V AC
- Frequency: UMTS 2100 MHz
- Camera: 300.000 pixels
- Dimensions: 70 x 44 x 18 mm
- Weight: 55 g

#### PKI 5860

- Power supply: power adapter 5V DC / 100-240 V AC
- Input resolution: 480 x 320
- Data format: JPEG
- Output resolution: 420 TV-lines
- IR-range: 10 m
- View angle: 120°
- Operating temperature: -10°C to +50°C
- Humidity: max. 85%
- Dimensions: 60 x 115 x 50 mm

#### PKI 5865

- Power supply: power adapter 6V DC / 100-240 V AC
- Detection sensor: dual element pyro-electric sensor
- Animal alley: 12 m long, 100° sector
- Terminal block: key switch input and indication lamp output
- Band system: WCDMA
- Operating frequency: UMTS 2100 MHz
- Camera module: 2,0 mega pixels
- Imaging and video: QVGA ( 320x240 pixels)
- Frame rate: 15 fps max.
- Memory card: supports Micro SD 4 GB max.
- Back up battery: DC 4,8V, 300 mAh rechargeable
- Dimensions: 120 x 70x 50 mm



### PKI 5870 PKI 5875

## Floodlight Monitoring Camera, IR Monitoring Camera

This system is equipped with a high resolution camera controlled by a motion detector. Videos and pictures are stored on a SD-card stating time and date. At darkness the system starts a 500 watt spotlight (PKI 5870) or an IR spotlight (PKI 5875). Recorded data can be transferred via USB port to a PC or a separate card reader. This system is perfect for uncomplicated but successful monitoring.

### Specifications:

- Recording: unlimited on SD-card
- Camera: CMOS sensor, 1600 x 1200
- Halogen spotlight: sensational 500 W
- IR-spotlight: 20 m range
- Motion detector: 9 m range
- SD/MC card: up to 2 GB for 5000 pictures
- Power supply: 230 V AC / 50 Hz
- Options: easy and individual activation via display. Brackets for wall mounting included.



### PKI 5880

## Audio / Video Belt Recorder

Some years ago it would have been incredible to hide a camera with audio / video recorder fully camouflaged in a belt buckle. Unlike wireless devices this system cannot be located by HF detectors. The colour camera with built-in microphone captures every movement. Micro SD-card, recorder switch, power on/off and USB port are integrated in the bottom of the buckle.

### Specifications:

- Dimensions: 6,45 x 3,73 x 1,52 cm
- Recording: real time in 3 GP
- Memory: SD micro card 128 MB – 8 GB (up to 8 hours recording time)
- Recording time: up to 2 hours per battery
- Video format: AVI 640x480
- Adapter: USB and cable for charger
- Power supply: lithium-ion batteries





### PKI 5885

## Outdoor Video Investigation Set

The **PKI 5885** especially has been developed by us for the use by police officers and other security guard patrols of any kind of governmental departments. It especially should be used by those who need to keep a clean record of their sincere investigation. **PKI 5885** is another crime fighting and easy to use unit which enables you to record the actions of the suspected persons. Such video recordings can or will be used as evidence to prosecute those individuals who violate the law. With its specific small dimensions, lightweight and perfect size it can be clipped to a belt and provides a clear and evidence-proved coloured picture recording at daylight or at sufficient surrounding artificial light conditions. It furthermore can work during

low light conditions, due to the built-in IR-illuminators, and then provides a sharp and clear black-and white picture which is stored on the exchangeable standard SD-card.

#### Specifications:

- High resolution video quality in AVI video format
- Lightweight enough to carry on you with clip to hook on the belt
- Built-in IR illuminator for night vision recording (b/w when used in night-vision application)
- Repeated and continuous recording
- Use SD card from 128 MB to 2 GB
- Dimensions: approx. 100 x 80 x 60 mm
- Weight: approx. 80 g



### PKI 5900

## Submarine Video Camera

The **PKI 5900** conducts searches with actual underwater views without sending a diver into a potential dangerous situation. Up to a maximum depth of approx. 20 meters this self-contained video system can be used for location and study of suspicious objects and areas. The built-in 1/4 inch colour camera together with 2 integrated ballasts guarantee for a stable and clear picture of the area to be examined. The video signal as well as power supply for the camera are transferred by only one cable between camera and receiving unit. At receiving site a 7" TFT LCD display provides the picture of the inspected area. A socket for recording devices is implemented. The complete set consists of:

- Colour camera with sealed housing and ballasts
- 7" TFT colour display

- Sunshade for the display
- Battery and A/C-Adapter
- Protective aluminium storage case with inlays
- 20 m cable for video signal and power supply for the camera

#### Specifications:

- Camera: 1/4" high resolution CCD colour camera, 420 TV lines
- Cable length: approx. 20 m
- Display: 7" TFT LCD colour
- Power supply: 12 VDC operation with rechargeable battery with charge cord and AC/DC adaptor for the display
- Weight: 8,9 kg
- Dimensions: storage case -60 x 40 x 20 cm



- Hermetically sealed
- Diving depth up to 20 m
- Colour CCD image sensor
- 7" TFT LCD monitor

### PKI 5910

## Personal Underwater Propeller

Years of engineering and design have resulted in the **PKI 5910** Personal Underwater Propeller that provides power of 3 km/h for up to 40 minutes of use with a standard battery. At the same time it is compact and light-weight. The ergonomic handle with integrated trigger and master switch facilitate the operation and manoeuvrability. A rigid grille protects the propeller against obstructions. The complete unit is maintenance-free and has only to be rinsed with fresh water after use.

#### Specifications:

- Size: 670 x 430 x 430 mm
- Battery: lead-acid battery, 3 sections, with charger
- Battery capacity: 12 VDC - 12 A/h or 7 A/h (optional)
- Charging adapter included
- Charging time: approx. 10 hours
- Motor high performance electric motor, 12 VDC, 65 Watts
- Weight: 5.3 kg with 7 A/h battery



- 6.8 kg with 12 A/h battery
- Speed pulling divers at max. 3 km/h
- Operating time: up to 1 hour (standard battery), up to 1.5 hours (external battery)
- Depth rating: 65 feet / 20 m
- Thrust: 11 pounds / 5 kg
- Material / Housing: PP

- Gears & Levers: Nylon
- Seals: PTFE impregnated NBR
- On/off: Master switch used to disable the normal on/off trigger. When the master switch is in OFF position the unit can be handled without fear of accidentally putting the main trigger into ON position

**PKI 5915**

## Underwater Robot



The requirements of an underwater robot have to meet various differences compared with a land robot. The propeller drive allows movements in 3 dimensions and can turn around its own axes. Of special importance is to keep the device stable in currents and turbulences, as tools such as x-ray devices have to stay fixed. Such an underwater system must be capable of scanning via camera and sonar and use its tools. The **PKI 5915** is a compact and approved robot system for underwater operation. It is controlled by cable

and camera from the ship's deck and is easy to transport with its handy control device, power supply and accessories. Due to its weight of approx. 50 kg and more it is easy to handle for 2 persons. Controller and cable are integrated in a separate hard cover protective case.

**Specifications:**
**Robot**

- Length: 1.000 mm
- Height (without additional modules): 500 mm

- Width: 600 mm
- Weight: 50-62 kg (as per configuration depending on equipment)
- Speed: more than 5,556 km/h
- Cargo load: 4-16 kg (as per configuration depending on equipment)
- Operation depth: 300 m

**Controlling**

- Cable length: 450 m
- Cable length fibre-glass: 1.100m (optional)
- Power supply: 100-270 V (2,8 kW)

**PKI 5925**

## Submarine Observation Vehicle and Manipulator

The **PKI 5925** is really a breakthrough in technical development of smallest but extremely manoeuvrable submarine devices for observation and manipulation tasks. By long lasting experience. **PKI ELECTRONIC INTELLIGENCE GmbH**, can proudly state that this is the only unit which has been developed by professional engineers and in close co-operation with divers and users of submarine- and deep-sea manipulators. Due to the 18 kg this system can be transported by a single person in every sea- or fresh-water terrain as well as in tubes and pipes. It only takes about 3 minutes to get the unit ready for operation and manipulation can be effected by just one hand.

**Specifications:**

- Dimensions of observation: vehicle 203 x 152 x 146 mm
- Weight of observation: vehicle 3 kg
- Max. diving depth: 75 m
- Camera: installed CCD-colour, 520 lines, 0.1 Lux, fixed focus 100 to infinity
- Jet-Pipes: 6 thrusters (4 x horizontal, 2 x vertical)
- Lamps: 4x LED systems with adjustable intensity
- Steering: 5-axes Spacemouse, 8 functions
- Display: 5.6" TFT-colour display
- Carrying capacity: 300 g



- Power supply inputs: 90-260 VAC or 124 to 370 VDC
- Outputs Video: 1 + 2, Diagnosis
- Hard cover carrying case 15-18 kg, 490x380x190 mm
- Optional equipment: reverse camera and lightning depth sensor, 2-way manipulator, etc.



## PKI 5950

### Video Surveillance Set

This set offers a full range of video equipment for every type of observation. Whether a direct connection via cable or a wireless transmission is applicable – this set contains each component for a successful and professional operation. The complete set of video observation devices includes body-worn systems such as the camera in a cigarette package with directly connected digital video recorder, the day-and-night- system, the video transmitters with up to 4 Watt output power for larger distances and the corresponding receivers at 1.2-1.5 GHz. All these devices offer tremendous possibilities to the operator for unexpected video observations.

#### Specifications:

The **PKI 5950** is a complete set of video surveillance devices consisting of:

- **PKI 5000** Professional Audio/Video Set
- **PKI 5600** Analogue Video Transmitting and Receiving System
- **PKI 5700** Disguised, Wireless Audio/Video Transmitter

- **PKI 5725** Wireless Camera, Transmitter/Receiver System
- **PKI 5750** Wireless Audio/Video System disguised in a smoke detector
- **PKI 5830** Camera in a wall-clock
- **PKI 5850** Digital miniature with flash memory video recorder
- All technical details can be taken from descriptions mentioned in this catalogue
- For further information please feel free to contact us



## PKI 5955

### Camera Spy Set

This camera set includes different objectives with focal distances of 8, 12, 25 and 50 mm. A screw head objective is included as well, which is an excellent camouflage. The set also includes a pinhole colour camera with exchangeable thread for the various objectives. With this large variety of camera types, the **PKI 5955** set covers all needs that might occur during unobtrusive video surveillance.

#### Specifications:

- Image scanner: CMOS
- Video output: PAL

- Synchronisation: horizontal 15625 Hz, vertical 50 Hz
- Resolution: 628 x 582 pixel
- Minimum illumination: 4 Lux
- S/N ratio: > 40 dB
- Video output: 1Vss / 75 Ohm
- Operation Temperature: 0-40°C
- Power supply: 5-7,5 V = 40 mA
- Dimensions: 20 x 20 x 28 mm
- Weight: 10 g / 6 g
- Carrying case and camera connection cable included



## PKI 5960

### Outdoor Video Investigation Set

In many occasions when you need to observe rooms from the outside, a precise preparation is necessary as well as the use of our special equipment. Our complete program, as shown in this catalogue, offers the complete range of devices for such tasks, but there is no omnipotent single unit to do everything. But as each government department should have at least a minimum range of equipment for video observation we have assembled this basic set **PKI 5960** in order to satisfy each and every demand in daily and practical use. Other combinations of our products can be assembled in close contact with our customers. Please contact us for further combination possibilities. Technical data of each item included in this set can be taken from this catalogue.

#### Specifications:

- The complete set consists of:
- **PKI 5715** window camera with
- **PKI 5755** receiver
- **PKI 8025** silent drill
- **PKI 8015** rigid search endoscope
- **PKI 5745** miniature camera with transmitter and receiver
- **PKI 8100** video inspection camera with display

