Personal Alarm Systems

The PAS Personal Alarm System is an ultrasonic based emergency notification/communication system. Individuals moving throughout a facility can immediately identify their exact location in a crisis via the transmitter carried with them. A variety of features and system configurations are available to readily interface with any security control equipment or the PAS-120, a complete multiplex system. The same transmitters and receivers are used in either version.

SPECIFICATION

**PAT/S (Transmitter)**
- Activation - Latching push switch, optional man-down or optional pull-pin
- Battery - 9 Volt lithium
- Colour - Dark grey with red button
- Dimensions - 6.1 W x 2.3 D x 9.7 cm H
- Estimated Battery Life - 1 Year
- Pocket Clip - Moulded Lexan - moveable for left or right access
- Weight - 114 g (4 oz)

**PAR (Receiver) MODELS 03RM, 03RM/IV, 03RM/WP, O3RM/WPH**
- Alarm contacts - NO/NC supervised or non-supervised dry contact relay
- Circuit components - 100% solid-state; conformal coated PCB
- Connection - Plug-in terminal block
- Enclosure (Exterior) - 2 gang weather proof box with gasket, (Supplied with WP units)
- Enclosure (Interior) - 2 cm x 5.4 cm (4 in. x 2.1 in.) deep electrical, (Not supplied) Flush or recessed with plaster ring
- Power requirement - 40 mA @ 12 VDC or 24 VDC, noise ±0.5 Vpp
- Tamper switch - 2 NC magnetic reed switches (0.25 Amp @ 12 VDC)

**O3RM/WPH Heater Unit**
- Power requirement - 1.0 Amp @ 12 VDC, 0.5 Amp @ 24 VDC

**SPECIFICATION**

**PAT/C (Transmitter)**
- Activation - Latching push button and keeper/loop pull-pin
- Battery - 9 Volt lithium
- Colour - Light grey with dark grey button
- Dimensions - 3.8 W x 6.04 H x 2.1 cm D (1.5 W x 2.4 H x 0.8
- Estimated Battery Life - 1 Year
- Pocket Clip - Spring steel
- Weight - 43 g (1.5 oz)

**03RM/IV Video**
- AGC - Automatic
- Electronic shutter - electronically adjusts for lighting
- Focal length - 3 mm, F/3.5 (120°)
- Focus range - 10 mm to infinity
- Frequency - 15.734 kHz (H), 59.94 HZ (V)
- Minimum illumination - 3 lux (F/1.4)
- Operating temperature - 0 °C to +50 °C (32 °F to 122 °F)
- Pick up device - 1/3 in. CCD
- Pixels - 512 (H) x 492 (V)
- Resolution - 350 (H), 350 (V) TV lines
- Scanning system - 2:1 interlace
- Signal to noise ratio - 47 dB or more
- Video output - 1.0 V p-p, neg. sync, 75 OHM
THE RECIEVER (PAR 03RM)

- NO/NC Relay Output for Easy Integration in Any System
- Variable Range up to 30 m (100 ft.) Diameter
- Multiple Receivers can be mounted in Proximity for Large Area Coverage
- Two Alarm Relay Outputs
- Tamper Supervision
- Alarm LED
- Mountable in Double Gang Electrical Box

THE TRANSMITTER (PAT)

Upon activation, the Transmitter emits a continuous modulated ultrasonic signal.

Unlike radio signals, ultrasonic signals do not penetrate walls, ceilings or floors; therefore, the transmission signal is confined to the immediate area of the transmitter. The signal transmission is omni-directional, eliminating the need to point or direct the transmission as is necessary with IR based transmitters. Furthermore, the ultrasonic signal transmission is not blocked by the carrier’s body nor items or furnishings in the area.

Activation takes place via a latching alarm button which has been specifically designed to prevent accidental activation. Two additional methods are also available as options, pull-pin (PAT/C) and man-down. The man-down feature (available on PAT/S Model only) provides automatic transmission of an alarm whenever an individual is in a prone position (greater than 60° from vertical). In order to prevent accidental transmissions by this method, the transmitter will emit a warning tone first and allow a four second time delay to correct the position before an alarm is transmitted.

The PAT transmitters are housed in rugged, moulded Lexan® cases. Sturdy pocket clips provide a variety of mounting/carrying configurations. An optional belt holster for the PAT/S is recommended when it is intended to be worn on a belt. A lithium battery is included with each transmitter. A special tool is provided to gain access to the battery compartment.

The PAR 03RM is the receiving unit that decodes the modulated ultrasonic signal emitted by the PAT transmitter. The alarm contact, auxiliary contact and LED latch each time an alarm is received and remain latched as long as an activated transmitter is within range. The latching condition is held for five seconds after the transmitter is de-activated. A built-in microphone and preamplifier provide audio assessment capability of the alarm.

Receiving range is factory adjusted for a nominal distance of 15 m (50 ft.) radial, 30 m (100 ft.) diameter. This can be field adjusted as required. The red alarm LED assures the user that the transmitter signal has been received and the alarm message has been sent. For outdoor applications, two weatherproof versions of the PAR receiver are available.

The PAR 03RM/IV ultrasonic receiver contains a super miniature CCD camera with a wide angle lens. The only difference in appearance from a standard receiver unit is a small circular opening on the face plate to accommodate the fixed camera lens. Upon alarm, both video and audio assessments are available in the security command centre.

RECEIVER/COMMUNICATOR (PARC)

The PARC is the unit that receives alarm and audio signals from a group of four receiver units (PARs), and then sends the alarm, audio and video to the central control. Each PARC contains the circuitry that interfaces to the PAR units and the multiplex transponder circuitry that communicates the alarm information to the PAS 120. Various audio and video (with PARC/IV) switching configurations are field selectable to best suit the application.

PAT TESTER UNIT

The PAT Test Unit is designed specifically for use with the Personal Alarm Transmitters (PAT/S, PAT/C). The transmitter is activated and the test initiated when the PAT is properly inserted into the tester. A yellow LED indicates the test is in progress. Within 2 seconds, the Tester Unit checks the transmitter signal strength, frequencies and modulation rate. A green LED indicates a satisfactory test completion and fully operational transmitter. A red LED and alert tone signify any fail conditions.