



Personal Alarm System

Personal Alarm System (PAS) is an ultrasonic emergency notification/communication system.

The room-based location of an individual moving throughout a facility is immediately determined when he or she activates their Personal Alarm Transmitter (PAT) device.

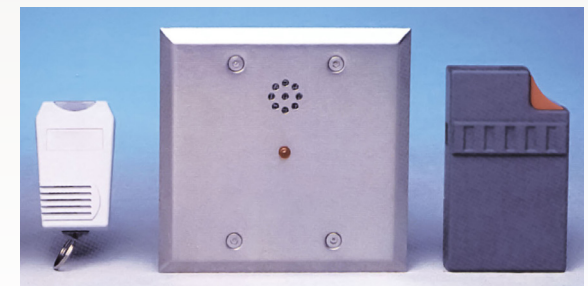
Through integration with a security management system, the location of the individual requiring assistance can be graphically represented on a map-type display at a central location. One or more receivers are installed in each room or hallway for the coverage area of the system.

PAS transmitters are discreet, compact and rugged and can be worn on the belt either with a belt clip or in a holster, or as a pendant. Transmitter activation can be through button press, pendant pull-ring or self-activation in a man-down situation.

Receivers are flush-mounted in the wall or ceiling and provide an alarm output, auxiliary alarm output and a visible LED that illuminates to indicate that an alarm has been received.

Features and Benefits

- Immediately detect and locate an individual in distress
- Omni-directional reflective ultrasonic signal ensures reception of alarm signal
- Modulated ultrasonic signal results in very few false alarms
- Ultrasonic does not penetrate walls - alarms can be localized to a given room
- Personal Alarm Transmitter (PAT) types:
 - Standard PAT (PAT/S), push button activated
 - PAT/MD, push button or man-down activated
 - Compact PAT (PAT/C), push button or pull-ring activated
- Audible low-battery warning on transmitter
- Rugged design for reliable operation
- Integrates easily with security management system (1 relay per receiver)
- Low power transmitters for long battery life
- Variable range to 30 m (100 ft) diameter
- Multiple receivers can be mounted in proximity for large area coverage



HOW IT WORKS

Unlike radio signals (RF), ultrasonic signals do not penetrate walls, ceilings or floors. Transmission/ reception is confined to the immediate area of the transmitter and there is no confusion regarding where response should be sent. This ensures PAS' location identification is accurate since there is no "bleeding" of signal between walls or floors.

The ultrasonic transmission is modulated and receivers will only alarm when a transmission containing two set frequencies in an established pattern is received. This eliminates false alarms from items such as keys, metallics, and HVAC systems, as it is unlikely for the same modulated frequency pattern to be duplicated. Upon activation, the transmitter emits a continuous ultrasonic signal. The signal is omni-directional, eliminating the need to point or direct the transmission.

PAS TRANSMITTERS

The PAT is activated by pushing a latching alarm button which has been specifically designed to prevent accidental activation. Additional methods are available as options: pendant pull ring and man-down. In order to prevent accidental man-down transmissions, a warning tone is emitted first and allows a 4 second time delay to correct the transmitter position before an alarm is sent. A breakaway lanyard is supplied with the PAT/C (compact unit).

PAT housings are made from rugged Lexan cases. Sturdy pocket / belt clips provide a variety of carrying positions. An optional holster is available for the standard PAT (PAT/S) and PAT with man-down feature (PAT/MD) for wearing on a service belt. A lithium battery is included with each transmitter along with a special tool to gain entrance to the battery compartment. An audible tone is emitted when the battery runs low; it will sound for several days. All transmitters are interchangeable within the system.

PAS RECEIVERS

The receiver decodes the modulated ultrasonic signal emitted by the PAT transmitter. An alarm contact, auxiliary contact and LED latch each time an alarm is received. They remain latched when an activated transmitter is within range. The latching condition is held for 5 seconds after the transmitter is deactivated.

Receiving range is factory adjusted for a nominal distance of 15 m (50 ft) radius, 30 m (100 ft) diameter. This can be field adjusted if required. The red alarm LED assures the user that the transmitter signal has been received and the alarm message has been sent.

The receivers are water-resistant and may be installed outdoors (heater option for colder climates). In the event of an alarm activation, the event is localized to the area monitored by the reporting receiver.

PAT TEST UNIT

The PAT test unit allows customers to regularly test the PAT units and maintain confidence in the operation of the system.

PART	MODEL	DESCRIPTION
02-200001-SMT3	PAT/S	PAT - push button activation includes 9V lithium battery
02-200001-SMT4	PAT/C	Compact PAT - push button activation includes 3-3V lithium battery and lanyard attachment
02-200001-MD3	PAT/MD	PAT/S with man-down switch
T0MD0100	HOLSTER	Leather holster for PAT/S and PAT/MD units
02-200005	PTU	PAT test unit
02-200005-1	PTU/C	PAT/C test unit
LAN-B		Safety lanyard with clip
02-201500	03RM	Receiver - standard
02-201500-1	03RM/WP	Receiver - weather protected
02-201500-2	03RM/WPH	Receiver - weather protected with heater

Technical Specifications

PAT/S (STANDARD TRANSMITTER)

- Dimensions: 9.7 H x 6.1 W x 2.3 D cm (3.8 x 2.4 x 0.9 in.)
- Weight: 114 g (4 oz.)
- Color: Dark gray with red button
- Activation: Latching push switch, optional man-down (PAT/MD) or optional pull-pin
- Pocket clip: Molded Lexan® - moveable for left or right access
- Battery: 9V lithium
- Estimated battery life: 5 year shelf, 1 year of operation

PAT/C (COMPACT TRANSMITTER)

- Dimensions: 6.04 H x 3.8 W x 2.1 D cm (2.4 x 1.5 x 0.8 in.)
- Weight: 43 g (1.5 oz.)
- Color: Light gray with dark gray button
- Activation: Latching push button and pendant pull-ring
- Pocket clip: Stainless steel
- Battery: 9 V lithium pack
- Estimated battery life: 5 year shelf, 1 year of operation

RECEIVER COMMON FEATURES (ALL MODELS)

- Connection: Plug-in terminal block
- Alarm contacts: Alarm and auxiliary relays, NO or NC
- Alarm LED: Red
- Tamper switch: 2 NC reed switches (0.25 A @ 12 VDC)
- Enclosure requirements (interior): 10.2 cm x 5.4 cm (4 in. x 2.1 in.) deep electrical box (not supplied) flush or recessed with plaster ring
- Enclosure requirements (exterior): 2 gang weatherproof box with gasket (supplied with WP units)
- Power requirement:
 - Receiver: 40 mA max at 12 to 48 VDC
 - Heater unit: 0.5 A at 12 VDC, 1.0 A at 24 VDC