Committed to security
“This document is the first Catalogue of Perimeter Security Technologies. We introduce the technologies used by our company for perimeter security, with special reference to the more technical aspects, the connection diagrams and the configurations. These products have been sold over many years. Since 1974, our mission has been to satisfy the most demanding customers around the world. Thanks to our experience, we can meet all requests for security, even the most extreme and delicate. Over the years, our research and development staff have acquired knowledge and skills, which have allowed us to become a world leader in the security market. Today, our company offers the broadest outdoor perimeter protection product portfolio in the world.”

Pietro Capula
President of GPS Standard SpA
Invisible perimeter protection systems are installed below ground level and therefore they can not be sabotaged, as they cannot be seen, nor be tampered with. They ensure protection without altering the aesthetic appearance of the site.

Main characteristics:
INVISIBLE, underground installation is environment- and building-friendly;
FLEXIBLE, the system follows the perimeter and ground shape, it recognizes small animals, thus avoiding unwanted alarms;
ADAPTABLE, it can be installed under every type of ground, it is weather-resistant;
RELIABLE, thousands of systems installed all over the world;
MAINTENANCE, very low.
GPS Plus, Ground Perimeter System, is the ideal solution for sites at high risk of intrusion.

GPS Plus is designed with DSP microprocessor technology (Digital Signal Processing). The signal from the sensor is digitized and analysed in time and frequency domains, providing extremely accurate processing.

In addition to high immunity to weather related interference, typical of the underground tube system, the sensor can also identify signals to be ignored, such as those with a repetitive frequency (rail, road with high traffic density, etc.) and only consider signals generated during the crossing of the sensitive area by intruders. The system is passive and, therefore, not detectable.

Operation. GPS Plus is based on the detection of a difference in pressure between two tubes laid down and buried along the perimeter to be protected, then filled with a liquid that allows operation even at low temperatures (antifreeze) and properly pressurized. Crossing the sensitive strip generates a pressure difference in the tubes; this is detected by a special transducer and the signal thus obtained is analysed by the processor, which will identify the alarm conditions and send them to the control centre. The system can also store signals generated immediately before and after the event that can be reviewed later.

The ability to calibrate the sensitivity of each section independently allows the system to be adapted to the particular characteristics of each individual installation.

GPS Plus intelligent components are self-protected by a "watch dog" system; in case of shutdown, this will automatically restore normal operation.

This system can be combined with other protection systems (perimeter, indoor sensors, CCTV, access control, fire systems) and it can be centralized with flexible solutions for any requirement and application.

Versions. GPS Plus is available in 2- and 4-tube versions. Both versions are available in Stand-Alone and Multiplex. The Stand-Alone version, 2- or 4-tube with DSP analyser for outdoor use, ensures maximum protection of 200mt per system. Multiplex ensures maximum protection of 12.8 Km with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 3 main parts: the field, the DSP signal analyser and the central unit.

The field is of the “sensitive” part of the system and it can detect the events generated during a violation of the protected perimeter. It includes sensors, valves and tubes with the pressurized fluid, which, if placed in parallel at a distance of 1.2-1.5 mt, form a 3mt-wide sensitive strip for 2-tube version, and about 6m for the 4-tube version; this area is up to 200mt long (100mt each zone).

The DSP analyser processes the signals generated by sensors. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripheral devices (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high-speed BUS (1 15,000 bps) and it can reach perimeter lengths of up to 5 km, without signal regeneration. MIND can handle a maximum of 16 different types of peripheral (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrices.

Features. GPS Plus is patented by GPS Standard; the system is based on detection of a difference in pressure between two parallel rubber tubes, buried along the perimeter to be protected.

GPS Plus is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis.

Very low percentage of false alarms due to unwanted vibrations (a train passing by, highway in the vicinity, etc ...) thanks to:

- analysis of signals in the time and frequency domain, eliminating background noise.
- system self-learning: the system can be “trained” to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Invisible: the installation does not compromise the appearance of the site.

Passive: it is not detectable by any instrument (metal detector or other).

Flexible: the system can follow the contours and shape of the site.

Adaptable: it works under virtually any surface, so there is no need for any physical barrier.

Reliable: thousands of systems installed all over the world in over 30 years.

Monitoring: the only maintenance required is periodic inspection of tube pressure; any reduction is automatically reported by the system.

Cost effective: half price compared to RF systems.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
PPS, Perimeter Position System, represents the evolution of the traditional GPS Plus system. This is also based on pressure difference detection. The innovative feature of PPS system is the ability to determine the crossing point of the protected strip with a maximum resolution of ± 5 mt, giving detection of a maximum of 20 crossing zones, distributed over 200 mt of protection, obtained with a pair of sensors. The length and number of zones can be configured using the management software.

PPS can be easily interfaced with an integrated video surveillance system with mobile cameras that automatically display the crossing point for video-monitoring of the event. The system electronics is designed with a DSP microprocessor with exceptional processing and signal analysis power. The signal from the sensor is analysed in the time and frequency domains, distinguishing common events from real alarms.

The signals from sensors are stored in an archive with a time interval before and after the alarm. The type of analysis carried out on signals from sensors ensures high immunity to environmental and atmospheric events, making this system suitable for installation in sites subject to particular interference, such as proximity to railways, roads with heavy traffic or high traffic density. The system is passive and, therefore, not detectable.

PPS System with DETECTION of the crossing POINT

PPS, Perimeter Position System, represents the evolution of the traditional GPS Plus system. This is also based on pressure difference detection. The innovative feature of PPS system is the ability to determine the crossing point of the protected strip with a maximum resolution of ± 5 mt, giving detection of a maximum of 20 crossing zones, distributed over 200 mt of protection, obtained with a pair of sensors. The length and number of zones can be configured using the management software.

PPS can be easily interfaced with an integrated video surveillance system with mobile cameras that automatically display the crossing point for video-monitoring of the event. The system electronics is designed with a DSP microprocessor with exceptional processing and signal analysis power. The signal from the sensor is analysed in the time and frequency domains, distinguishing common events from real alarms.

The signals from sensors are stored in an archive with a time interval before and after the alarm. The type of analysis carried out on signals from sensors ensures high immunity to environmental and atmospheric events, making this system suitable for installation in sites subject to particular interference, such as proximity to railways, roads with heavy traffic or high traffic density. The system is passive and, therefore, not detectable.

Operation. PPS is based on the detection of a difference in pressure between two tubes laid down and buried along the perimeter to be protected, then filled with a liquid that allows operation even at low temperatures (antifreeze) and properly pressurized. Crossing the sensitive strip generates a pressure difference between the tubes; this is detected by a special transducer and the signal thus obtained is analysed; any alarm condition is sent to the control centre. At the same time, the DSP analyser processes the signals coming from the two sensors located at the ends of the sensitive area, and defines the exact crossing point. Furthermore, the system can store signals generated before and after the event and then review them later. The ability to calibrate the sensitivity of each section independently allows the system to be adapted to the particular characteristics of each individual installation.

PPS intelligent components are self-protected by a “watch dog” system; in case of shutdown, this will automatically restore normal operation. This system can be combined with other protection systems (perimeter, indoor sensors, CCTV, access control, fire systems) and it can be centralized with flexible solutions for any requirement and application.
Components. The system is divided into 3 main parts: the field sensors, the DSP signal analyser and the central unit. The field consists of the “sensitive” part of the system, it can detect the events generated in the course of a violation of the protected perimeter. It includes: sensors, valves and tubes with the pressurized fluid, which, if placed in parallel at a distance of 1.2-1.5 mt, form a 3mt-wide and max 200mt-long sensitive strip, which can be divided in a maximum of 20 zones of 10mt each. The DSP analyser processes the signals generated by the 2 sensors. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripheral devices (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high-speed BUS (115,000 bps) and it can reach perimeter lengths of up to 5 km, without signal regeneration. MIND can handle a maximum of 16 different types of peripheral (GPSPLUS, PPS, RFC, DPS, DPR, SNAKE, WPS, TFSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts. With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrices.

2 local inputs and 2 relay outputs available (underground version).

Identification of the crossing point.

Local recording.

Self-calibration.

Features. PPS is based on detection of a difference in pressure between two parallel rubber tubes, buried along the perimeter to be protected. PPS is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis.

Very low percentage of false alarms due to unwanted vibrations (a train passing by, highway in the vicinity, etc ...) thanks to:
- analysis of signals in the time and frequency domain,
- eliminating background noise,
- system self-learning: the system can be “trained” to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Detection of the crossing point with an accuracy of ± 5mt using software subdivision of the perimeter into different zones; this feature allows activation of other devices such as, for example, speed dome cameras to view, with precision, the alarmed zone.

Invisible: the installation does not compromise the appearance of the site.

Passive: it is not detectable by any instrument (metal detector or other).

Flexible: the system can follow the contours and shape of the site.

Adaptable: it works under virtually any surface, so there is no need for any physical barrier.

Reliable: thousands of systems installed all over the world in over 30 years.

Maintenance: the only maintenance required is periodic inspection of tube pressure; any reduction is automatically reported by the system.

Cost effective: half price compared to RF systems.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc. It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
RFC is an invisible radiofrequency security system; using two cables buried at 15-20 cm depth, one of which is the receiver and the other the transmitter, 1.10-1.20 mt apart, it creates an electromagnetic field sensitive to target movement in the protected area.

The system is modular and allows the protection of perimeters of any length; it is particularly suitable for sites that require a high level of protection.

The system electronics contains a DSP microprocessor with exceptional processing and signal analysis power. The signal from the RFC mixer is analyzed in the time and frequency domain, distinguishing common events from real alarms. The signals from sensors are stored in an archive with a time interval before and after the alarm. It can detect a person or a vehicle crossing the sensitive area and it is insensitive to ground vibrations.

Operation. RFC detects the change of the electromagnetic field generated by people or objects crossing the sensitive area. The change of the electromagnetic field recorded by the mixer, by comparing the transmitted and received electromagnetic energy, generates signals that, properly processed and analyzed, allow correct determination of system alarm conditions. The real alarm signals are then sent to the control centre.

Versions. RFC is available in Stand-Alone version, for protection of max. 300 mt, and in Multiplex version, for protection of max. 19.2 Km, with a single perimeter control unit (MIND). The architecture allows connecting up to 64 MIND units.
Components. The system is divided into 3 main parts: the field sensor, the DSP signal analyser and the central unit.

The first consists of the "sensitive" part of the system which can detect the events generated in the course of a violation of the protected perimeter. It includes: Mixer; analyser; Tx and Rx cables. Each Mixer is connected, via 4 non-sensitive cables, to 4 sensitive cables (2 transmitters and 2 receivers), generating the sensitive area of approx. 3mt wide and 300mt-long (150mt per channel). The DSP analyser processes the signals generated by the mixer, caused by the changes in the electromagnetic field in the sensitive area.

The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripheral devices (analysers) connected on a single cable (data and power).

The connection between the MIND and the peripherals is via a serial high-speed BUS (115,000 bps) and it can reach perimeter lengths of up to 5 km, without signal regeneration. MIND can handle a maximum of 16 different types of peripheral (GPSPLUS, PPS, RFC, DPS, DPP SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrixes.

8 local inputs and 8 relay outputs available (optional).

Local recording, self-calibration.

Features. Interchangeable sensors: all sensors work with the same frequency as they use transmission time multiplexing, which allows all the sensors to be programmed the same way, but they can be used on different zones.

Very low percentage of false alarms due to unwanted vibrations, thanks to:

- analysis of signals in the time and frequency domain, eliminating background noise.
- system self-learning: the system can be "trained" to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Invisible: the installation does not compromise the appearance of the site.

Flexible: the system can follow the contours and shape of the site.

Adaptable: it works under virtually any surface.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

It allows connection via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
DPS, Dual-Technology Perimeter System, is a dual-technology system created by the combination of two invisible systems: “GPS PLUS”, detecting pressure difference, and “RFC” detecting changes in an electromagnetic field. Using a DSP microprocessor, DPS allows the processing of a large number of signals received in a very short time. The changes in pressure and electromagnetic field generate signals that, properly processed and analysed, allow the correct determination of system alarm conditions. The alarm signals obtained this way are then sent to the control centre. The system is modular and allows protection of extended perimeters. It can generate the alarm event when the signal comes separately from the two technologies (OR), or only when the detection comes from both sensors (AND).

**Operation.** DPS is based on two different technologies: GPS Plus and RFC, enhancing their main characteristics. GPS Plus is based on the detection of the difference in pressure generated by people or objects on the ground, passing over the sensitive area. RFC detects changes in the electromagnetic field generated by people or objects crossing the sensitive area; it then makes a comparison between the radiofrequency energy that is transmitted and received. The signals obtained from two sensors are sent to the analyser, that analyzes and transmits warning or alarm signals to the control unit. Crossing of the sensitive strip generates a significant change of pressure in the tubes, which is detected by an appropriate transducer. It also generates a change of the electromagnetic field, which is detected by the RCF system Mixer. The signals thus obtained are analysed by the DSP and translated into warning or alarm signals. The possibility to calibrate the sensitivity of each leg allows the system to adapt to the particular characteristics required for each installation.

**Versions.** DPS is available as a Stand-Alone version, for maximum protection of 200 mt, and in Multiplex version, for maximum protection of 12.82 Km, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 3 main parts: the field, the DSP signal analyser and the central unit.

The first consists of the “sensitive” part of the system; it can detect the events generated in the course of a violation of the protected perimeter. It includes: RFC (Mixer) sensor with associated sensitive cables and two GPS sensors, with associated tubes and valves. Each Mixer is connected, via 4 non-sensitive cables, to 4 sensitive cables (2 transmitters and 2 receivers). Each GPS sensor is connected to the tubes containing liquid under pressure. The sensitive area created is approx. 3mt-wide, and a maximum of 200mt-long (100mt per zone).

The DSP analyser processes the signals generated by RFC cables, provided by the mixer, and GPS sensors.

The central unit consists of the power supply unit, MIND unit and relay boards. The MIND unit can handle up to 64 peripheral devices (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high-speed BUS (115,000 bps) and it can reach perimeter lengths of up to 5 km, without signal regeneration. MIND can handle a maximum of 16 different types of peripheral (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts. With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrixes.

8 local inputs and 8 relay outputs available (optional).

Local recording, self-calibration.

Features. DPS uses two perimeter control technologies, thus ensuring high sensitivity and minimizing the percentage of unwanted alarms.

DPS is based on detection of the difference in pressure between two parallel tubes in rubber, buried along the perimeter to be protected.

Detection of signal energy levels (spectrum analysis).

Non-sensitive cables used to connect the sensitive cables to the mixer are of standard type and of any length.

It is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis.

Very low percentage of false alarms thanks to:

- analysis of signals in the time and frequency domain.

- system self-learning: the system can be "trained" to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Invisible: the installation does not compromise the appearance of the site.

Flexible: the system can follow the contours and shape of the site.

Adaptable: it works under virtually any surface, so there is no need for any physical barrier.

Reliable: thousands of systems installed all over the world in over 30 years.

Maintenance: the only maintenance required is periodic inspection of tube pressure; any reduction is automatically reported by the system.

Cost effective: half price compared to RF systems.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc. It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
DPP Dual-technology System with detection of the crossing point

DPP, Dual-Technology Perimeter Position System, is a dual-technology system created by the combination of invisible systems: PPS, detecting the pressure difference with identification of the crossing point, and RFC detecting changes in an electromagnetic field. Through the use of a DSP microprocessor, this system allows processing a large number of signals received in a very short time. The change of pressure and electromagnetic field generate signals that, properly processed and analysed, allow the correct determination of system alarm conditions. The alarm signals obtained this way are then sent to the control centre. The system is modular and allows the protection of extended perimeters. It can generate the alarm event when the signal comes separately from the two technologies (OR), or only when the detection comes from both sensors (AND).

Operation. DPP is based on two technologies, and it uses their main characteristics according to the type of installation: PPS and RFC. PPS detects the pressure differences created by people or objects on the ground, passing over the sensitive area. RFC detects the changes in the electromagnetic field generated by people or objects crossing the sensitive area; it then makes a comparison between the radiofrequency energy that is transmitted and received. The signals obtained from the two sensors are sent to the analyser, which analyzes and transmits warning or alarm signals to the control unit. PPS is based on the detection of a difference in pressure between two tubes laid down and buried along the perimeter to be protected, then filled with a liquid that allows operation even at low temperatures (antifreeze) and properly pressurized. Crossing the sensitive strip generates a pressure difference between the tubes; this is detected by a special transducer and the signal thus obtained is analysed; any alarm condition is sent to the control centre. This system identifies the crossing point. The possibility to calibrate the sensitivity of each leg allows the system to adapt to the particular characteristics required for each installation.

Versions. DPP is available as a Stand-Alone version, for maximum protection of 200 mt, and in Multiplex version, for maximum protection of 12.82 Km, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 3 main parts: the field, the DSP signal analyser and the central unit. The first consists of the "sensitive" part of the system, it can detect the events generated in the course of a violation of the protected perimeter. It includes: RFC (Mixer) sensor with associated sensitive cables and two GPS sensors, with associated tubes and valves. Each Mixer is connected, via 4 non-sensitive cables, to 4 sensitive cables (2 transmitters and 2 receivers). Each GPS sensor is connected to the tubes containing liquid under pressure. The sensitive area created is approx. 3mt-wide, and a maximum of 200mt-long. The DSP analyser processes the signals generated by RFC cables, provided by the mixer, and GPS sensors. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115.000 bps). MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts. With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrices.

8 local inputs and 8 relay outputs available (optional).

Local recording, self-calibration.

Features. DPP uses two perimeter detection technologies, thus ensuring high sensitivity and minimizing the percentage of unwanted alarms. DPP is based on detection of the difference in pressure between two parallel rubber tubes, buried along the perimeter to be protected.

Interchangeable sensors: all sensors work with the same frequency as they use transmission time multiplexing, which allows all the sensors to be programmed the same way, but they can be used on different zones.

The sensitive cable is of fixed geometry and guarantees easy installation and maintenance; it can be used, replaced, extended anywhere.

Non-sensitive cables used to connect the different cables to the control unit are of standard type and of any length.

It is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis.

Very low percentage of false alarms thanks to:
- analysis of signals in the time and frequency domain, eliminating background noise.
- system self-learning: the system can be "trained" to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Invisible: the installation does not compromise the appearance of the site.

Flexible: the system can follow the contours and shape of the site.

Adaptable: it works under virtually any surface, so there is no need for any physical barrier.

Maintenance: the only maintenance required is periodic inspection of tube pressure; any reduction is automatically reported by the system.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc. It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
MILES is a protection system for ducts and pipelines. It uses a fibre optic cable and has a very high detection capability, being totally immune to electromagnetic interference and atmospheric conditions.

The fibre optic cable requires no power in the field and, therefore, power supply units along the protected perimeter protected are not required.

The system allows the protection of very long pipelines (gas, oil pipelines, etc.), up to 50 km, and the area where the sabotage is taking is identified to the nearest few hundred meters. Fibre optic is installed over the pipe to be protected, whether it is visible or underground. Modular up to thousands of kilometres, with power supply points every 50 km.

Operation. The fibre optic cable is subjected to mechanical stress caused by stimuli, such as pressure, vibration and motion, which changes the transmission characteristics of the light inside the fibre. The change is minimal, but with a source of coherent light obtained with laser diodes and sophisticated amplifier and processing systems, a signal that can be processed can be obtained.

The careful analysis of the signal and the ability to change, using a calibration and monitoring software, specific parameters that determine the system operation, give this product excellent performance characteristics.
Components. The system is divided into 2 main parts: fibre optic in the field and PC-based signal analyser in a control room. The fibre optic is the system “sensor” and it is sensitive to mechanical stress produced during attempted sabotage (digging the ground, explosion, hammering, etc.).

The analyser processes the signals generated by the differences between the transmitted and received light beams using sophisticated software algorithms. It consists of the laser light generator, the light reception components and the PC-based signal analyser. Via a LAN interface port, using priority protocol, it generates the alarm signals coming from various parts of the system. With dedicated control software it is possible to set system parameters, display the signals and store them in a file for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrixes.

Local recording, self-calibration.

Features. MILES is resistant to weather conditions, such as rain, snow, hail, etc., because it works with spectrum analysis of signals.

Very low percentage of false alarms due to disturbances such as wind, vibration caused by heavy loads passing nearby, etc. This is thanks to:

- analysis of signals in the time and frequency domain, thus eliminating background noise.
- system self-learning; the system can be “trained” to recognize certain behaviour, such as attempted sabotage, simulated during the calibration.

Immune to electromagnetic disturbances.

Calibration is carried out when the system is installed (in real operating conditions), to “simulate” the type of detection desired, thus ensuring very high immunity to any interference.

The MILES analyser processes the signals generated by the differences between the transmitted and received light beams using sophisticated software algorithms.
The perimeter protection systems associated with fences require a supporting structure; they detect the stress developed in the supporting structure caused by an attempted intrusion.

Two types of protection are associated with fences, microphonic cable and fibre optics. The first consists of a coaxial cable that generates an electrical signal with audio frequencies as a result of the mechanical stress of an attempted intrusion. The signals are then processed to verify the alarm condition.

Fibre optic systems, meanwhile, generate an alarm signal when the attempted intrusion produces a stress on the fibre; the change of the received light intensity is transformed into an alarm.
PERIMETER SECURITY

CPS Plus, Cable Perimeter System, is a perimeter protection system based on a microphonic cable, that represents an evolution of the traditional CPS system. It is based on a microprocessor with DSP technology analyzing the signals in the time and frequency domain highly accurately. In operation, the system can differentiate different types of environmental signals from those of genuine alarms. The signals generated by the microphonic cable are automatically compared with those previously stored during the system setup. Dependent on the type and duration of the received signal, the system recognizes the signal and, when necessary, activates the alarm.

Operation. CPS Plus is based on the detection, by the microphonic cable, of all the mechanical stresses produced by an attempted intrusion such as climbing, lifting or cutting the fence. These stresses produce deformation of the microphonic cable itself, which, due to a piezoelectric effect, converts them into electrical signals. The DSP signal analyser continuously analyses the electrical signal present on the microphonic cable, with a maximum length of 300 mt for each of two areas. If this exceeds the predetermined threshold, after subsequent comparisons with the pre-set system parameters, it generates an alarm or a warning. Dependent on the shape of the perimeter and desired degree of sensitivity, the cable layout can follow different configurations. The system can be connected to any type of alarm control unit and, during system installation, using a personal computer, the operating parameters can be adjusted.

Versions. CPS is available as a Stand-Alone version, for maximum protection of 600 mt (two zones of 300 mt each), and in Multiplex version, for maximum protection of 38.4 Kms, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 3 main parts: microphonic cable in the field, the DSP signal analyser and the central unit. The first is the “sensitive” part of the system and it is especially sensitive to mechanical stress produced during an attempted violation of the protection, such as cutting, climbing, cutting, etc. This stress is translated into an electric signal (piezoelectric effect) and transmitted to the analyser. Dependent on the shape of the perimeter and desired degree of sensitivity, the cable layout of can follow different configurations, using not more than 300 mt of cable per zone.

The DSP analyser processes the signals generated by the cable. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115,000 bps). MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPPSNAKE, WPSS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrices.

8 local inputs and 8 relay outputs available (optional).

Local recording, self-calibration.

Features. CPS Plus is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis.

Very low percentage of false alarms due to unwanted vibrations (a train passing by, highway in the vicinity, etc...) thanks to:

- analysis of signals in the time and frequency domain, eliminating background noise.
- system self-learning: the system can be “trained” to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

The calibration is carried out when the system is installed (in real operating conditions), to “simulate” the type of detection desired, thus ensuring very high immunity to unwanted alarms.

It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
SNAKE FIBRE OPTIC System

SNAKE is a perimeter protection system using fibre optic, intended both for indoor and outdoor applications. It uses opto-phonic technology to detect, in the case of outdoor applications, all the intrusion attempts such as climbing, cutting or the breaking through a fence; in case of indoor application, it warns against potential attempts to break through or penetrate the wall. The advantages given by the fibre optic for intrusion detection on a perimeter fence, even the longest, are the accuracy of detection, the ability to reach long distances without the need for intermediate power supplies, and, in particular, the complete immunity to electromagnetic interference and atmospheric events. It is also particularly suitable for the protection of sites with corrosive or flammable conditions and/or subject to extreme temperatures.

Operation. The sensing element is the fibre optic, through which a laser beam passes. This undergoes changes directly related to physical changes induced on the fibre by the attempted intrusion and the surrounding environment. The DSP analyser processes the signals generated by the differences between the transmitted and received light beams using sophisticated software algorithms, discriminating any natural event such as wind, rain, hail, etc., from the actual intrusion attempts, bypassing or breakage. Using simulation of events that must be detected, the detection parameters can be optimized, thus dramatically reducing any unwanted alarms. SNAKE can manage up to four sensitive areas.

Versions. SNAKE is available as a Stand-Alone version, for maximum protection of 8,000 m (four zones of 2,000 m each), and in Multiplex version, for maximum protection of 512 Km, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 3 main parts: fibre optic in the field, the DSP signal analyser and the central unit. The first is the “sensitive” part of the system and it is especially sensitive to mechanical stress produced during an attempted violation of the protection, such as cutting, climbing, cutting, etc. The laser analyser processes the signals generated by the differences between the transmitted and received light beams using sophisticated software algorithms. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115,000 bps) MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts. With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Signal processing in the time domain.

Signal processing in the frequency domain.

Combined frequency-time processing.

Use of masks to characterize and recognize signals sent by sensors.

Detection of signal energy levels (spectrum analysis).

Listing per category of signal energy matrices.

Local recording, self-calibration.

Features. SNAKE is resistant to weather conditions, such as rain, snow, hail, etc., because it works using differential signal analysis. Very low percentage of false alarms due to unwanted vibrations (a train passing by, highway in the vicinity, etc...) thanks to:

- analysis of signals in the time and frequency domain, eliminating background noise.
- system self-learning: the system can be “trained” to recognize certain behaviour, such as intrusion attempts, simulated during the calibration.

Immune to electromagnetic disturbance.

The calibration is carried out when the system is installed (in real operating conditions), to “simulate” the type of detection desired, thus ensuring very high immunity to unwanted alarms. It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.

SNAKE is resistant to electromagnetic disturbances.
This type of system does not require the installation of any specific structures. It can be integrated into existing structures or may form a self-standing protective structure.

The wire-based systems use a taut, sensitive cable and detect any mechanical stress caused to the structure, generating an alarm signal. They are normally used to prevent climbing over pre-existing walls or fences.

Sensitive pole barriers fit any length and perimeter shape; they can be installed also over or behind pre-existing boundary walls.

Infrared barriers provide effective protection especially for long perimeters. The narrow beam of infrared light emitted by the transmitter is particularly suitable for installation in narrow spaces.
WPS, Wire Perimeter System, self-standing system, is a real perimeter barrier consisting of sensitive wires, positioned about 15 cm apart, supported by support poles placed along the entire route about 2.5 to 3.0 mt apart, fastened to 2 terminal poles. The barrier thus formed is sensitive to cutting or wire separation, resulting from a possible intrusion attempt. WPS is a modular system that allows protection of any size and shape of the perimeter. It can be installed also over or behind pre-existing boundary walls.

**Operation.** WPS is based on the electro-constriction property and is sensitive at every point of its length. The active part is a cable with steel central core. Its special characteristics make it sensitive to any act of sabotage. As a result of mechanical stress, the cable generates an electrical signal due to the motion between the cable core and the dielectric; this signal is pre-amplified locally and transmitted to a control unit that analyzes it intelligently with a resulting alarm signal. The microprocessor unit can discriminate any signals due to weather events - such as wind, hail, rain, thermal effects - from alarms generated by a real intrusion.

**Versions.** WPS is available as a Stand-Alone version, for maximum protection of 2,400 mt, and in Multiplex version, for maximum protection of 153 Km, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
The system is divided into 3 main parts: the sensitive wire with amplifier, the signal concentrator and the perimeter control unit.

The sensitive wire is connected to the amplifier unit. Each sensitive cable can have a max length of 300 mt and, by means of pulleys, it can be installed in different configurations, depending on the height of the zones. The amplifier units, which are directly connected to the sensitive cables, receive electrical signals from the cables and, after appropriate amplification, send them to concentrators. They also generate an alarm if the sensitive wire is cut.

The concentrator is a microprocessor unit that intelligently analyzes signals from a maximum of 8 amplifier units, with subsequent generation of alarm signals. It can also discriminate any signals generated by wind, hail, rain, etc., or thermal effects from real alarms.

The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115.000 bps). MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Components.

The WPS cable generates an electric signal in proportion to the mechanical stress and energy applied to the cable.

Characteristics.

Modular system.

Max 300 mt-long wire per area.

Real physical barrier.

Detection of mechanical stress.

It can be installed also over or behind pre-existing fencing or walls.

Resistant to low temperatures.

Customized sensitivity calibration per zone.

**Plus.** WPS is the only system using a wire sensitive to stretching and at the same time, forming a physical barrier.

Very low percentage of false alarms due to disturbances such as heavy loads passing nearby, thanks to automatic alarm threshold control. If a similar signal is detected on adjacent zones, the alarm threshold is increased by a value equal to the minimum value of the signal detected on all zones monitored by the single analyser.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.

**WPS is an alarmed fence.**

**Components.** The system is divided into 3 main parts: the sensitive wire with amplifier, the signal concentrator and the perimeter control unit.

The sensitive wire is connected to the amplifier unit. Each sensitive cable can have a max length of 300 mt and, by means of pulleys, it can be installed in different configurations, depending on the height of the zones. The amplifier units, which are directly connected to the sensitive cables, receive electrical signals from the cables and, after appropriate amplification, send them to concentrators. They also generate an alarm if the sensitive wire is cut.

The concentrator is a microprocessor unit that intelligently analyzes signals from a maximum of 8 amplifier units, with subsequent generation of alarm signals. It can also discriminate any signals generated by wind, hail, rain, etc., or thermal effects from real alarms.

The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115.000 bps). MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPP, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Modular system.

Max 300 mt-long wire per area.

Real physical barrier.

Detection of mechanical stress.

It can be installed also over or behind pre-existing fencing or walls.

Resistant to low temperatures.

Customized sensitivity calibration per zone.

**Plus.** WPS is the only system using a wire sensitive to stretching and at the same time, forming a physical barrier.

Very low percentage of false alarms due to disturbances such as heavy loads passing nearby, thanks to automatic alarm threshold control. If a similar signal is detected on adjacent zones, the alarm threshold is increased by a value equal to the minimum value of the signal detected on all zones monitored by the single analyser.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.

**WPS is an alarmed fence.**
TPS, Taut-wire Perimeter System is a self-standing pole structure, constituting a real physical barrier, sensitive to any stress generated by attempted intrusion. This system is especially suitable for anti-climb protection (over a wall), or whenever a physical barrier is needed (fence).

Two types of pole sensors are available: TPSE100 and TPSM200. The first uses an electronic sensor, while the second is a mechanical one. The system is modular and allows protection of long perimeters.

TPS consists of a variable number of parallel plain or barbed wires, at a min. distance apart of 15 cm for TPSM and 9cm for TPSE, connected to a pole sensor, which is the active part of the system.

**Operation.** The electronic TPS pole sensor detects any movement of the taut wire as a result of mechanical stress via the sensitive component, which is a microphonic cable. Dependent on the separation force applied to the taut wires, a signal is generated which, after appropriate amplification stages, is sent to the concentrator. This, in turn, examines and translates the signal into warning or alarm signals. The threshold is tailored to the needs of each individual installation. The mechanical TPS pole sensor houses the mechanical sensors (joystick), mechanically connected to the wires. A movement of the wire during the intrusion attempt, moves the joystick that mechanically acts on a switch, generating the alarm condition.

**Versions.** Mechanical TPS cannot be configured as a multiplex system and the protection of one pole sensor covers 60 mt. Electronic TPS is available as a Stand-Alone version, for maximum protection of 480 mt, and in Multiplex version, for maximum protection of 31 Km, with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
TPSM200 components. Mechanical TPS, TPSM200, uses a sensor pole. Barbed wire is stretched and connected inside the sensor pole to Joystick sensors. TPS “Joystick” sensor provides the N.O. alarm contact on the terminal block. Therefore, TPSM200 consists only of one sensor, with two positions: ON (alarm) and OFF (rest); it goes from OFF to ON only if a certain force is applied to the connected wire. Obviously, this force generates an alarm, according to the system calibration. The sensitivity is mechanically adjusted with the nut located on the “joystick” lever.

TPSE100 components. Electronic TPS, TPSE100 is divided into 3 main parts: the sensor pole, the signal concentrator and the central unit. The sensor pole contains a microphonic cable inside, which is fastened to the taut wires. The microphonic wire is connected to the amplifier unit.

The concentrator is a microprocessor unit that intelligently analyzes signals from a maximum of 8 amplifier units, with a subsequent generation of alarm signals. It can also discriminate any signal generated by wind, hail, rain, or thermal effects from real alarms. The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115.000 bps) MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPR, SNAKE, WPS, TPSE and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts. With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Caratteristiche.
Modular system.
Detection of mechanical stress.
Differential analysis of signals.
Sensibility calibration per leg (60m).
Constituting a real physical barrier.

Features. TPS uses sensor poles to alarm taut wires, while forming a physical barrier.

Very low percentage of false alarms due to disturbances such as heavy loads passing nearby thanks to automatic alarm threshold control.

If a similar signal is detected on adjacent zones, the alarm threshold is increased by a value equal to the minimum value of the signal detected on all zones monitored by the single analyser (in electronic version).

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc. It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.
IPS INFRARED System

IPS, Infrared Perimeter System is an infrared perimeter protection used for both internal and external applications. It is based on micrometer mechanics, allowing maximum precision in the alignment of beams. As it is based on microprocessor technology, thanks to intelligent analysis of the received signal, it can eliminate false alarms due to interference and detect attempts to mask the cells. IPS is resistant to weather conditions such as rain, snow, hail. In facts, if visibility between transmitters and receivers is reduced (due to fog, heavy rain, snow), an automatic gain control circuit tries to restore the optimal level of infrared light reception. When this is not possible, the concentrator disables the beam, that can no longer work in these conditions, generating a disqualification alarm. Restoration of normal operation occurs automatically when normal visibility is achieved. The models currently available are equipped with single- or double-beam transmitters and receivers.

Operation. The concentrator, which can be connected up to a maximum of 8 double-beam receivers, sends commands, via the sync cable, to turn on the transmitters connected to the synchronizer. Simultaneously, it enables the receiver corresponding to a particular transmitter. The concentrator processes the light pulses received from the various connected cells. If the beam between TX and RX is interrupted, for the pre-set crossing time, it generates an alarm. The maximum capacity of the IPS 6000 series is 250 mt internal and 200 mt external, and 200 mt internal and 150 mt external for 4000 series.

Versions. IPS is available as a Stand-Alone version, for maximum protection of 250 mt internal and 200 mt external, and in Multiplex version, for maximum protection of 32 Km (internal) or 25.6 km (external), with a single perimeter control unit (MIND). The architecture allows interconnection of up to 64 MIND units.
Components. The system is divided into 2 main parts: the field with the columns and the central unit.

The field is the “sensitive” part of the system, it can detect the events generated during a violation of the protected perimeter. It includes: Columns equipped with accessories, Tx and Rx beams, single or double, the concentrator and the synchronizer. The max leg length is 250mt internal and 200mt external.

The central unit consists of the power supply unit, MIND unit and relay boards. MIND unit can handle up to 64 peripherals (analysers) connected on a single cable (data and power). The connection between the MIND and the peripherals is via a serial high speed BUS (115.000 bps) MIND allows handling peripherals of 16 different types (GPSPLUS, PPS, RFC, DPS, DPB, WPS, TPS and IPS). Using the relay boards alarms from sensors are made available via voltage-free relay contacts.

With the control software (MPX2000) it is possible to set system parameters, display the signals and store them in a file, for later analysis.

Characteristics.

Time multiplexing - elimination of interference using “one by one” beam switching.

Micrometric orientation (horizontal/vertical).

Automatic Gain Control.

Range 150, 200, 250 (internal).

Crossing times can be programmed for each individual beam.

Connection to serial bus COM115 “Concentrator/UCP”.

Cable Synchronization.

Features. Total absence of interference between beams in the same or adjacent columns, as multiplexed analysis of the beams is carried out. There is no possibility of interference between beams as they are activated one by one for each column.

Detection of beam masking: the concentrator turns on the Rx and, before turning on the TX, checks that there is no interfering light signal due to deliberate interference. If a light signal is detected, it generates a warning signal.

Differentiated programming of alarm threshold: field crossing time can be programmed for each single beam. Longer times for lower beams and shorter for higher beams can be set.

Elimination of false alarms due to fog, snow, rain using the automatic gain control and disqualification circuit. IPS increases the signal amplification in case of bad visibility, by up to four times. Then IPS disables the beam in question and sends a disqualification signal. When visibility is restored, the beam is enabled again.

Local interface with other systems via serial data port, e.g. to speed dome, sirens, lights, etc.

It allows connection, via auxiliary inputs, of other stand-alone sensors installed nearby.

It can be integrated with other perimeter protection technologies, by using the same communication BUS, creating mixed systems from the various perimeter solutions provided by GPS Standard.

IPS, infrared system, flexible and suitable for any protection requirement.
SUN protects solar and photovoltaic panels from attempted removal, joining the panels together with a fibre optic cable. The system allows the protection of very large photovoltaic fields with detection of the area subject to attack.

**Operation.** SUN generates an infrared light that is sent along the fibre optic. At the same time, it analyzes the light that reaches the end of the protected area. The emitted light is appropriately modulated to avoid masking the receiver, placed at the end of the security fibre optic, with another source of light. In real time, SUN analyzes the light received and if this is insufficient, because of an attack, it generates an alarm. The alarm signal is generated via a relay contact (C, NO, NC). Each SUN unit can handle 800 mt of optical fibre, on which a maximum of 6 joints can be placed for easy installation of fibre optic panels.

**Versions.** The system is divided into 2 main parts: fibre optic and the sensor. The fibre optic “ties” the panels together, while the sensor generates the modulated light and analyzes the light received via the fibre optics.

**Features.** The multi-mode fibre optic can be equipped with connectors and can be connected using cold connectors, without the use of any special joining device.

Absence of false alarms due to disturbances, such as wind, rain, vibration.

SUN is simple, inexpensive and allows protection of hundreds of panels with a single cable.

The fibre optic has a small diameter and is easily installed on solar panels.

The fibre optic does not deteriorate, does not rust and lasts for many years.

SUN is a mechanical system, that can not be seen or removed.

Resistant to weather conditions and electromagnetic disturbances.
Centralization and control systems are used to integrate, control and centralize the various types of intrusion systems.

They use high-speed communication lines.

The operating parameters of these systems are programmable directly from the control centre via a personal computer, using a special software. For each alarm handled, it is possible to select and enter a specific procedure to be followed.
MULTIPLEX2000

MULTIPLEX2000 has two management levels, hardware and software. The hardware architecture refers to a control unit called MIND, which allows different types of security system to communicate, using a high-speed communication line called COM115. The second management level, however, is a software type and is called MULTIPLEX20000.

MIND, single perimeter control unit.

MIND unit uses two high-speed serial lines (115 kbaud) and the communication protocol GPS COM115 to communicate with remote peripherals. The two lines may be independent or loop-connected to ensure continuity of communication with the peripheral devices in case of attack or damage to the communication line. Each MIND unit can connect up to 64 remote devices of 16 different types, distributed in any combination along the two lines. For larger systems (thousands of km) up to 64 units MIND can be interconnected.

The MIND unit is connected to a personal computer - via a USB connection - to allow real-time monitoring of signals from sensors, configuration and programming of the relays, recording alarm events and associated analogue signals from the field sensors.

“COM115” serial line. COM115 is a high-speed communication line between control unit and peripherals. If two serial lines are used, the maximum distance covered by the system can be 40 km with repeaters (20 km + 20 km).

Remote Control Centre. The operating parameters of these systems are directly programmable from the control centre using a personal computer, and, using MPX2000 special software the signals detected by the sensor are displayed and stored in a file. These can then be analysed, to determine the optimum conditions for calibration of each system unit.

Graphic maps. Via graphical maps, the MPX2000 Software, “Maps” version, allows management of perimeter systems based on the Multiplex2000 system, by concentrating all signals from sensors. For each alarm handled, it is possible to select and enter the specific procedure to be followed.
Over 35-year experience meeting the most demanding customer’s requirements in Italy and abroad.

Thanks to our SKILLS, we can respond to all SECURITY requests, even the most extreme and delicate.

We protect homes buildings, businesses, offices, factories, banks, hotels, parks, public buildings, embassies, prisons, airports, military sites, ports, dams and pipelines, mines, oil wells, nuclear, electrical and photovoltaic power plants, mansions and museums, archaeological sites, valuables and all your personal belongings.

www.gps-standard.com
SCS
SUPERVISION and
CONTROL system

SCS system allows supervision and control of the most complex security installations, integrating the most advanced technologies developed by GPS Standard and Samsung Electronics.

The operator has a multifunctional and flexible software platform, that allows him to supervise and manage in an immediate and comprehensive way the information from all the various system devices. A simple authentication system for profiles allows changing the access level to the system and the area of responsibility according to the characteristics of the user: guard, supervisor, administrator, etc. ...

Site management is via graphical maps and icons, thus allowing the operator with a simple click, to start even the most complicated operations. The use of macro control sequences allows automation of the installation. SCS integrates the management of: intrusion detection control units, perimeter systems, fire control units, access control systems, video recording systems, intelligent video analysis systems.