SkyGuard 500
Superior tracking for real-time monitoring

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SkyGuard 500 *Superior tracking for real-time monitoring*
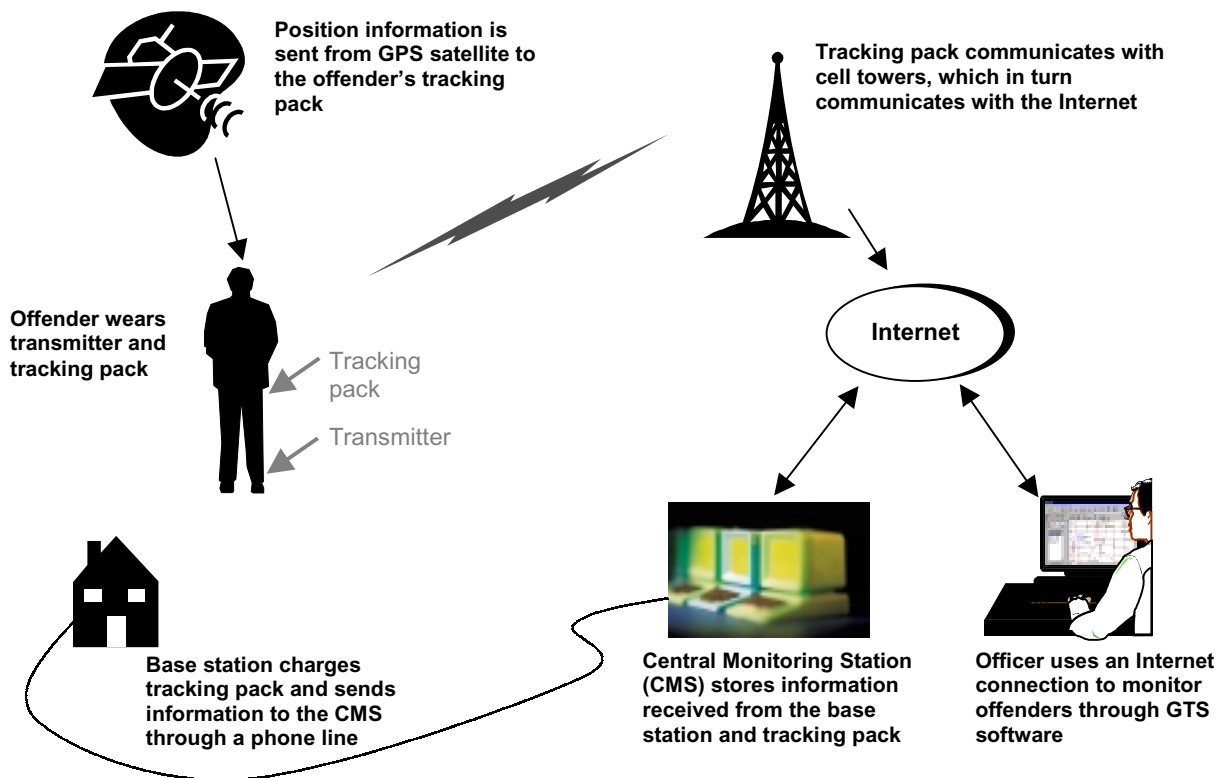
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- BI SkyGuard 500 Transmitter

- BI SkyGuard 500 Tracking Pack

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Position information is sent from GPS satellite to the offender's tracking pack

Tracking pack communicates with cell towers, which in turn communicates with the Internet

Offender wears transmitter and tracking pack

Tracking pack

Transmitter

Internet

Base station charges tracking pack and sends information to the CMS through a phone line

Central Monitoring Station (CMS) stores information received from the base station and tracking pack

Officer uses an Internet connection to monitor offenders through GTS software

SkyGuard 500: System Overview

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System overview

SkyGuard 500™is a state-of-the-art tracking system that
continuously monitors the location of offenders 24 hours a day.
Using sophisticated Global Positioning Satellite (GPS)
technology, SkyGuard 500 provides timely information about
an offender's location, as well as his or her compliance with
established boundaries and curfews. Corrections officers can
monitor offenders from multiple locations, such as home, office,
or car.

The SkyGuard 500 consists of five main components:

- SkyGuard 500 Central Monitoring Station (CMS)
- SkyGuard 500 Transmitter (transmitter)
- SkyGuard 500 Tracking Pack (tracking pack)
- SkyGuard 500 Base Station (base station)
- SkyGuard 500 Global Tracking System (GTS) software

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Central Monitoring Station

The SkyGuard 500 Central Monitoring Station (CMS) is the heart of the tracking system. It performs the following functions:

- Stores the SkyGuard database and processes information received from the base station and tracking pack

- Generates alerts if it detects that someone has tampered with the transmitter, base station, or tracking pack.

- Automatically reports violations in the form of an alert. For example, if an offender leaves the house outside the permitted time, the base station sends this information to the CMS, which alerts you via pager or e-mail.

Transmitter

The transmitter is a waterproof, battery-operated bracelet that the offender wears around the ankle or wrist. It sends a signal to the belt pack, which recognizes the proximity of the transmitter, as well as the transmitter's identification number, tamper condition, and battery status.

Transmitter features include:

- Low-power, radio-frequency transmissions
- Field-replaceable battery
- Adjustable, hypo-allergenic, replaceable strap
- Waterproof to 15 feet
- Multiple tamper and low-battery sensors
- Weighs less than four ounces

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- Automatic tamper reset
- Encrypted transmissions which prevent signal replication

Tracking Pack

The SkyGuard 500 Tracking Pack is a battery-operated unit enclosed in a shoulder bag and typically worn on the offender's body. Although the offender is not required to wear the tracking pack, to avoid an alert from being generated, the transmitter and tracking pack must remain within 30 feet of each other at all times. The tracking pack battery lasts approximately 16 hours and must be charged at the end of every day; the battery is charged by plugging the unit into the base station.

The tracking pack is capable of storing position information about the offender. Therefore, if an offender's position cannot be continuously monitored because of inconsistent cellular coverage, the tracking pack records GPS coverage information. This information is transmitted to the CMS when the offender plugs the tracking pack into the base station at the end of the day or when the tracking pack reenters cellular range.
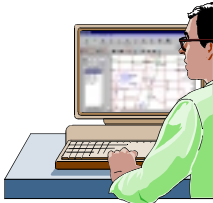
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Base Station

The SkyGuard 500 Base Station is the link to the offender, while he or she is at home (wearing the transmitter), and the central monitoring station The base station is installed in the offender's home and is connected to the home phone line.

The offender uses the base station to charge the tracking pack battery. When an offender returns to his home at the end of the day, he or she plugs the unit into the base station and the tracking pack battery is recharged. Additionally, the base station transmits any information stored in the tracking pack to the CMS via the phone line.

Features of the SkyGuard 500 Base Station include:

- Tamper detection sensors discourage unauthorized removal
- Back up battery that operates for up to 36 hours in the event of a power failure
- Detects up to 10 transmitters at one time
- Easy-to-configure, pro-active alert notification system
- Ability to define restriction zones

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SkyGuard 500 Global Tracking System software

The SkyGuard 500 GTS software lets you track offenders by accessing the application through your Internet browser. This means you can get position updates from any computer with an Internet connection – at home, in the office, even in your car.

The software provides the following information:

- Current position on an offender
- Past positions of an offender
- Offenders at a specific location
- Background information on an offender, including a photo
- Contact information for offender's victims
- Alert information for restriction violations

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How reliable is SkyGuard 500?

SkyGuard 500 monitors an offender's position 24 hours a day and provides live updates, so the offender's location is always known. Position information is updated at a rate of up to once per minute. This response may vary because of satellite or cellular phone coverage, low batteries, or other similar factors outside of the system's immediate control.

For example, if an offender enters a building, coverage may be reduced. However, even if coverage is inconsistent for a certain time period, the tracking pack stores all position information and may be downloaded to the CMS at the end of the day (when the offender connects the tracking pack to the base station). Therefore, **historical information about an offender is never lost**By storing position information, SkyGuard 500 tracks the offender and records his location at all times.

Because SkyGuard's functionality depends on satellites to receive offender position information, the location of these satellites affects the system's performance. In order to achieve the most accurate reading, SkyGuard requires three available satellites. By viewing the location of satellites at a given point in time, you can determine whether it's possible to obtain an accurate GPS position. You can view satellite positions by going to http://sirius.chinalake.navy.mil/satpred/ . You'll be required to enter latitude and longitude information, which is available by viewing an offender's address location on the map in SkyGuard.

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It's important to remember that the SkyGuard 500 is a tool. While it can reliably monitor an offender when used properly, it cannot predict offender behavior or prevent an offender from committing future crimes. Because the tracking system is only a monitoring tool, it is subject to human tampering.

For example, if the offender leaves the tracking pack at home, you will receive an alert, but cannot know the offender's location. Similarly, if an offender cuts the transmitter, an alert is generated, but you will be unable to track the offender's location. Or, if the offender fails to plug in the tracking pack at the end of the day (to recharge it) it will not work the next day when the offender leaves the house. However, when used in the correct manner, the SkyGuard 500 can effectively monitor offenders at all times.

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Benefits

SkyGuard 500 uses the most up-to-date satellite tracking technology to monitor offenders around the clock. The SkyGuard 500 system includes the following functionality and benefits:

- Continuous offender monitoring; all tracking information is stored and can later be downloaded to the central monitoring station
- Pager or e-mail alerts immediately sent to you if an offender enters a prohibited location
- Tamper messages alert you if someone has attempted to remove or interfere with the equipment
- A long-lasting transmitter battery (12 months); tracking pack battery lasts approximately 16 hours and is recharged at the end of each day, when offender returns home
- Reusable transmitter parts including the transmitter body, leverage hinged clamp/rails, and battery
- A flexible, easy-to-use software interface that lets you quickly access location and profile information about offenders, and contact information for victims

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If you're familiar with tracking …

If you've monitored offenders using a tracking system before, some of the concepts related to offender tracking may be familiar to you. However, as you use SkyGuard 500, you'll see that it takes traditional tracking methods a step further. Because SkyGuard 500 uses the latest global positioning technolgy, it can provide features and functionality previously unavailable in an offender tracking system.

- Real-time information on the location of offenders, updated at a rate of up to once per minute. Awareness of offenders' daily routines helps ensure work compliance. For example, since you know that Arthur Blackwell is required to be at work from 9-5, Monday through Friday, you can simply check his work location on a SkyGuard map to ensure that he's present at that location, during the required time period.

- Attendance at required classes or meetings, such as AA, can be quickly verified - no more driving around to check up on offenders. For example, if an offender is required to attend AA meetings every evening from 7-9 p.m. you can check the location of the meeting on a map to verify his presence at the meeting.

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- Past history of an offender's movements – a 24-hour record is kept of all locations an offender visits
- Improved management of offenders – easily track multiple offenders at the same time
- Quick and easy retrieval of location maps and offender information via the Internet
- Tamper and violation alerts sent immediately via e-mail, phone, and pages, on PCs, laptops, Palm Pilots, and cell phones
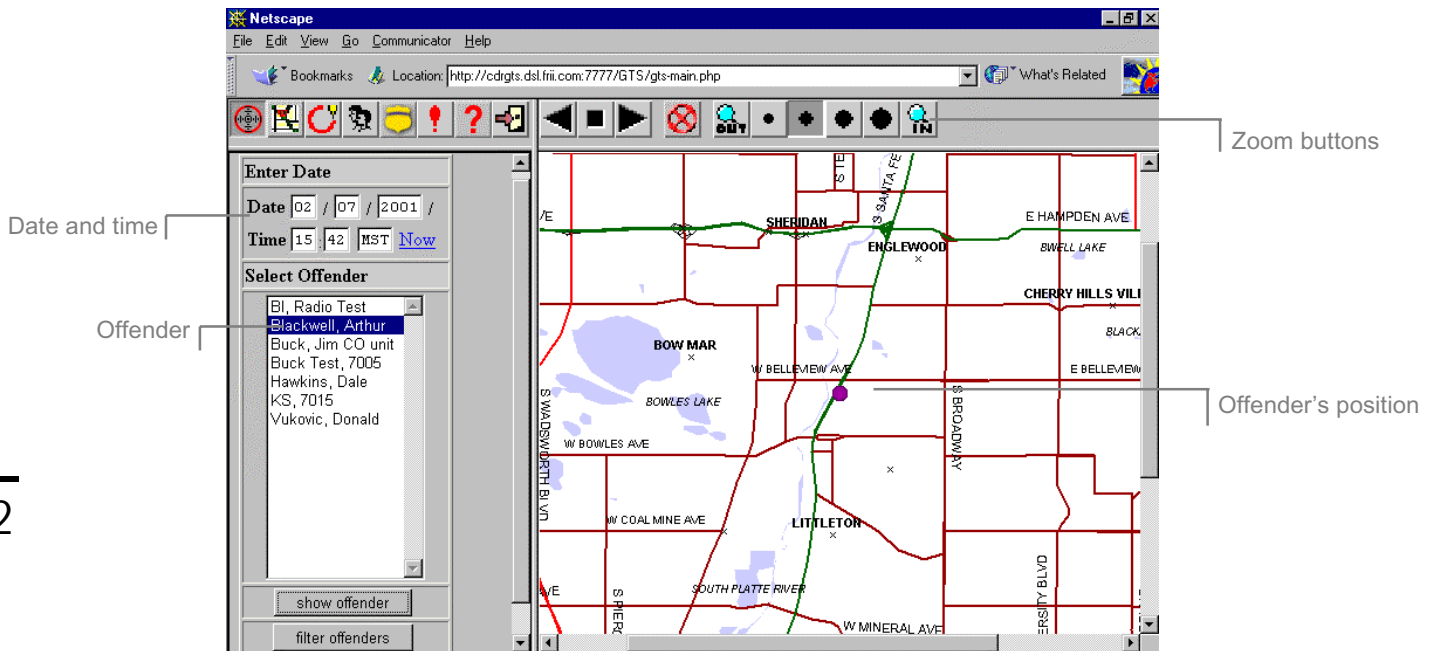
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SkyGuard 500 in action

A highly advanced offender tracking system, SkyGuard 500 offers minute-by-minute tracking capabilities using global positioning technology. SkyGuard 500 provides detailed restriction zones, a history of an offender's movement, and five levels of alert status. In addition, officers can access live tracking data from their home, office, or car.

SkyGuard 500 not only monitors and provides information about an offender's current location, but also stores up to 27 days of tracking information in the unlikely event that coverage is lost for a certain period.

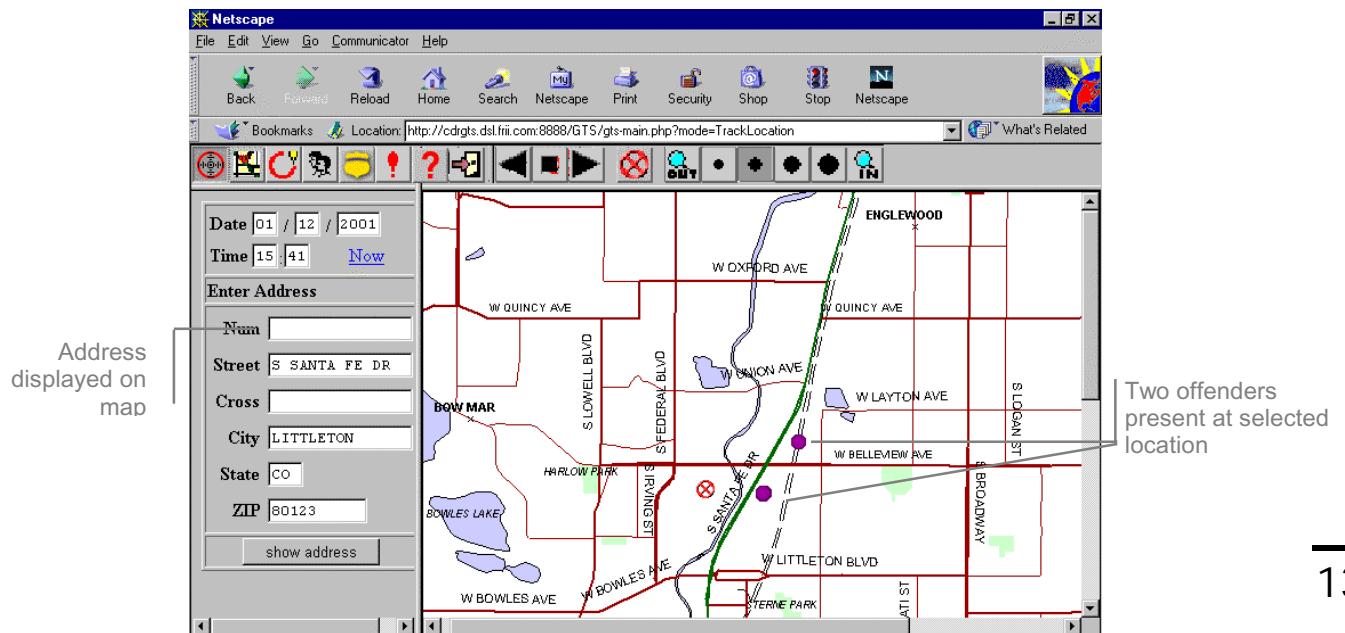The following screens illustrate some of the features of SkyGuard 500.

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Checking an offender's position

Offender Arthur Blackwell on February 7, 2001 at 3:42 PM

- You can check the current position of a specific offender by selecting the name from a list. SkyGuard 500 displays a map that shows the offender's current location. The offender's position is displayed on the map as a magenta dot.

- You can change the date and time, to show the offender's location for that period.

- You can use the zoom buttons to display more detail about the offender's position.
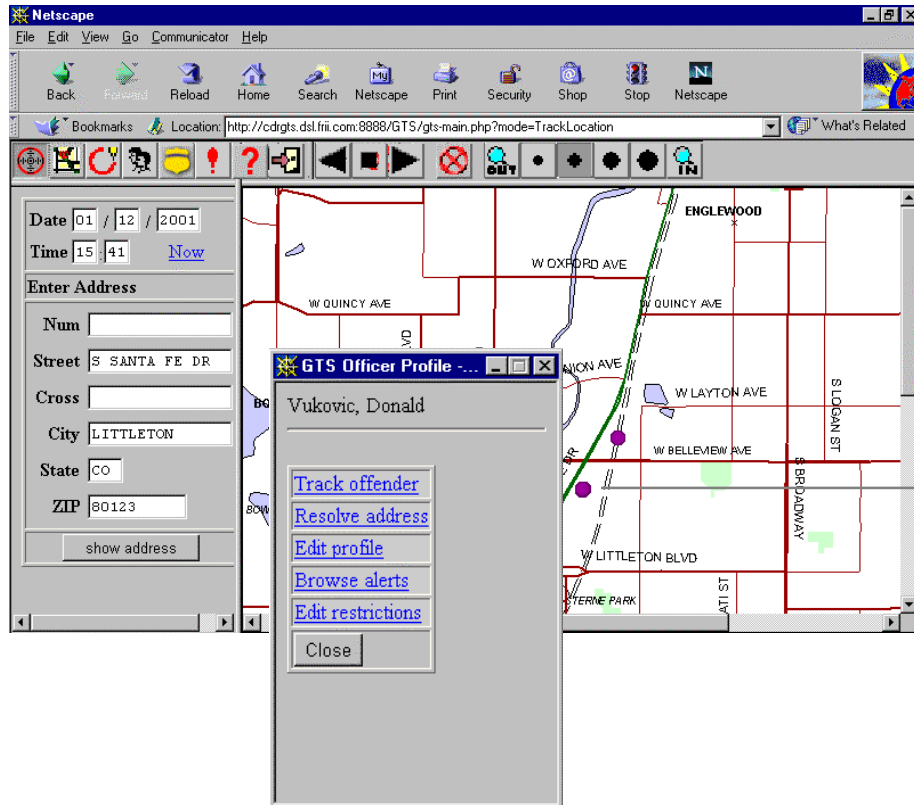
Checking a particular location for offenders

Address displayed on map

Two offenders present at selected location

Offenders present at S. Santa Fe Drive in Littleton, Colorado

- You can check a particular address or location, at a particular date and time to determine whether any offenders are present. Offenders are shown on the map with blinking magenta dots.

- Multiple dots indicate the presence of multiple offenders.

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Checking a particular location for specific offenders

Click a dot to display a popup with the name of the corresponding offender

Offender Donald Vukovic at S. Santa Fe Drive in Littleton, Colorado

- You can click on an individual dot to determine whether a particular offender is present at a specific location. SkyGuard displays a popup window showing the name of the offender at the location, as well as a list of options, which you can click to display more information about the offender.

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What are the officer's responsibilities?

To ensure the proper functioning of the SkyGuard 500, an officer must satisfy certain responsibilities. Generally you are accountable for the following tasks:

- Assembling the equipment and installing the batteries
- Fitting the offender with the transmitter and tracking pack
- Positioning and setting up the base station in the offender's home
- Entering each offender into the system
- Defining restrictions for each offender
- Logging into the CMS on a regular basis to verify whether the offender has complied with a restriction or requirement
- Reviewing the alert status for each offender on a regular basis
- Maintaining the equipment in proper working order, including checking the batteries on a regular basis

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Training and Support

BI is committed to providing complete training in SkyGuard 500. In addition to on-site personalized training and this document, the following documents are provided to you:

- SkyGuard 500 – A Guide for Officers
- SkyGuard 500 – A Guide for System Administrators

You'll use these documents during training to help you learn to use the system effectively. After training, these documents serve as a handy as a reference.

However, if you have a problem or question about the SkyGuard 500 system, you can contact BI's Technical Customer Support staff at 800-241-9924. You can reach the technical support staff Monday through Friday between 7:30AM and 5:00 PM Mountain time.

If you have an emergency or problem during non-business hours, call the above number and follow the voice prompts.

> **BI Technical Support**
> **800-241-9924**
> **Monday through Friday**
> **7:30 am – 5:00 pm**

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