

3rd Edition

# Guardian 2000<sup>tm</sup>

WILLIAM STUMP & ASSOCIATES, LTD

Quality Video Surveillance Equipment



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# William Stump & Associates

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Congratulations, and thank you for purchasing the New Guardian 2000 Surveillance / Recording System. The Guardian 2000 is the flagship system from William Stump & Associates, LTD. Besides being the most absolute effective outdoor recording unit, it is also the most economical. Numerous law enforcement agencies, private corporations, and individual consumers have found the Guardian 2000 is a very powerful tool and extremely user-friendly. Whether you are seeking evidence for courtroom proceedings, to further an investigation, or simply for peace of mind, the Guardian 2000 will accomplish your goals with such features as:

- 8mm VCR format
- 4 hours continuous recording time
- 25mm black and white low light camera
- high resolution color pinhole camera
- 60 day standby mode internal power supply
- external jack for alternate power supply
- wireless seismic sensor
- wireless beam-break sensor
- smart charging system
- optional day / night video system
- optional wireless video transmission to recorder
- optional video zoom camera

The entire system comes packaged in a convenient soft side case, which can either be carried as a back-pack or wheeled from site to site. As you read through this manual, please keep in mind your system has been rigorously inspected for utmost quality assurance prior to shipment. If you note any physical damages, immediately notify William Stump & Associates, LTD at (276) 979-1939, M-F, 9AM – 5PM, EST.

Once again, thank you for your purchase and continued support.

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## Before You Begin

*Please take a few moments and inspect the following components used with your Guardian 2000 Surveillance System.*



Carry / Tote Bag



Guardian 2000  
Recorder / Receiver



Hand-Held Sensor  
Alarm Receiver



Seismic Sensor  
Transmitter



Beam Break Sensor  
Transmitter



12V AC / DC  
Charging Unit



Long Range 25mm  
b/w Video Camera



Short Range  
Color Camera



12VDC Alt  
Battery Cable



Video Cable  
Connector Cover



Familiarization  
Video Tape



Day / Night Camera  
(Optional)



Video Zoom Camera  
(Optional)

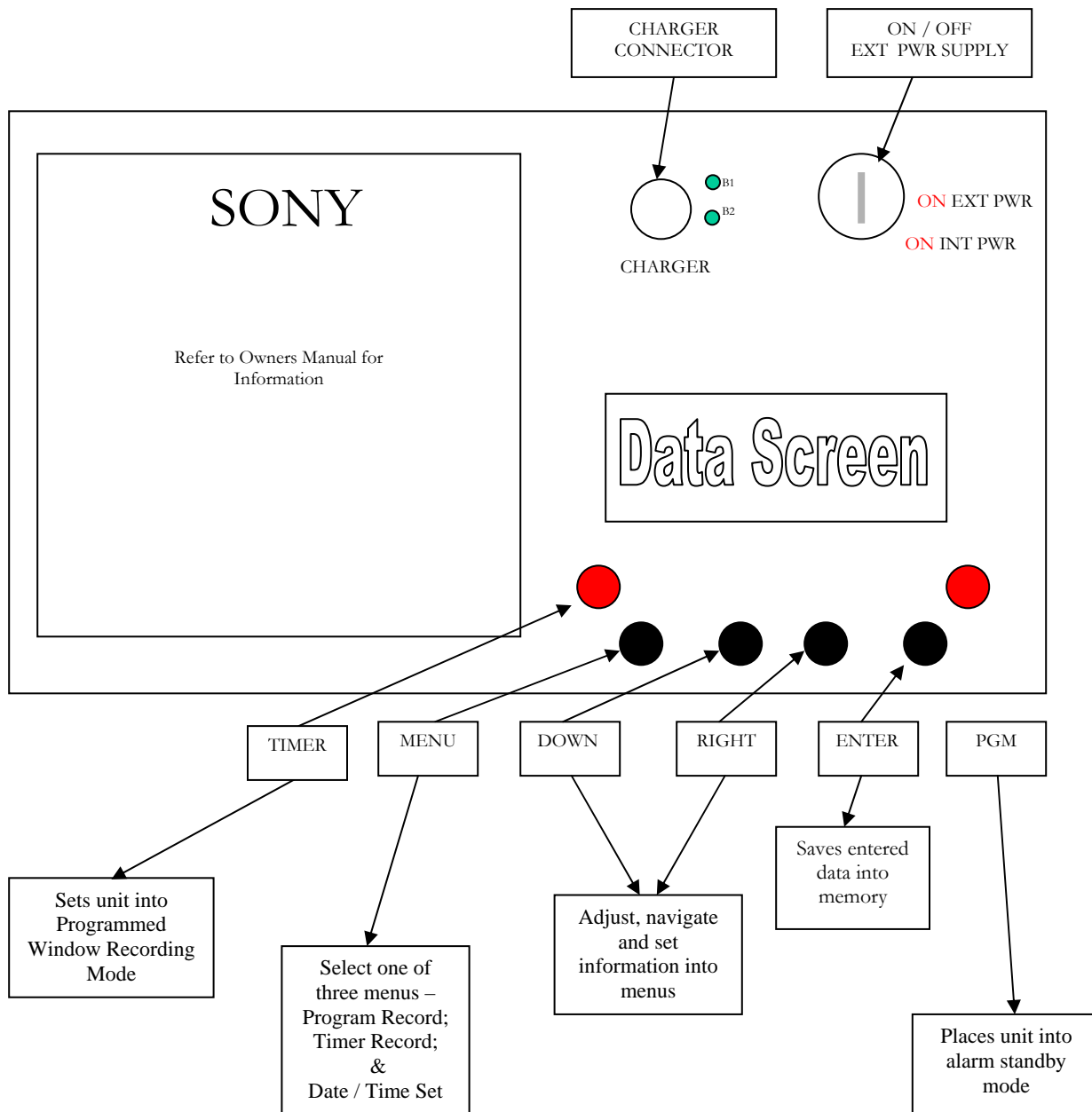


Ultralink Video  
TX / RX (Optional)

# Guardian 2000 Familiarization Diagram



FAMILIARIZE YOURSELF WITH THE UNIT WHILE VIEWING THE INSTRUCTIONAL VIDEOTAPE.





## Basic Operations

### *Charging the Guardian 2000*

The unit has not been completely charged prior to shipping. It is always best to fully charge the unit prior to any operation.

Plug the 12 Volt DC charger unit into an acceptable 110 ~115 volt AC outlet. **DO NOT** use any other type of charger as it will cause damage and yield it unserviceable! Plug the charger into the Guardian 2000 using the male four-pin connector (See Fig 1). The charger must have at least 6" of free space surrounding it to maintain correct operating temperature. Placing any foreign objects inside charger will result in damage and **possible personal injury**. GREEN lights on the Guardian 2000 will illuminate indicating the fuses are good and the unit is charging properly. Two RED lights on the charger will also illuminate. After the unit is completely charged, the GREEN lights on the Guardian will go off and charger lights will change to GREEN. Alternating color changes throughout the process is normal since the unit has dual battery banks. Complete charging takes about 18-26 hours. Additionally, once a year, turn the Guardian 2000 unit on and then turn the recorder (Sony EVO250, GVD800 and newer models) off. This will charge the internal vanadium-lithium batteries in the recorder.

**DO NOT  
use any  
other type  
of charger  
as it will  
cause  
damage**

### *Powering the Hand-Held Alarm Receiver*

The hand-held Beam-Break / Seismic Sensor Receiver is powered by one standard 9 Volt DC alkaline battery. The unit is shipped without one. Install a battery by removing the battery housing cover from the back of the unit. Place a battery snugly onto the battery tab and replace the battery compartment cover. Test the unit by switching the ON/OFF switch to the "ON" position. Press the alarm switch to "BUZZER" and it will sound. Turn the unit back off once the buzzer is heard. If the buzzer continues, the battery is low. See page 10 for additional details.

### *Powering the LCD Monitor*

The hand-held LCD monitor (for models without flip-up monitor) is power by four (4) AA alkaline batteries. Simply slide the battery compartment cover from the back, insert four new batteries paying particular attention to the "+" and "-" signs and replace the cover.

### *Powering the Seismic Sensor Transmitter*

The seismic sensor is powered by four (4) AA alkaline batteries and one (1) 9V DC battery (See Fig 2). No AA batteries were installed before shipping. To install the batteries, remove the four screws located on top of the transmitter housing. Place four AA batteries inside the battery holder as shown. The unit is now activated. Remove one of the batteries to keep the unit from transmitting until ready for use. Replace the top and tighten the four screws back into place.

ALWAYS  
install the  
antenna  
before  
batteries!

### *Powering the Beam Break Sensor Transmitter*

Power the beam break by placing eight (8) "AA" batteries into the emitter (portion with 3 pin connector) and four (4) "AA" and one (1) 9 volt battery to the receiver (portion with 4 pin connector). To install the batteries remove the four screws securing the containers' lids. Place the batteries into the holders paying particular attention to the "+" and "-" signs. Replace the tops and tighten the screws. To cut power off, remove one of the "AA" batteries from each respective holder.

### *Powering the Ultra-Link Wireless Video Transmitter (optional)*

For optimum transmitting time, the Ultra-Link Video Transmitter is powered by eight (8) "D" size alkaline batteries. To install batteries, remove the four outer screws located on the top of the transmitter housing. Unplug the power cable and remove the power supply holder. Install batteries as shown, paying particular attention to the "+" and "-" signs and re-assemble. \* Some brands of batteries are larger diameter and stick inside the plastic battery pack not allowing the ends to touch their respective contacts. Check batteries to insure the positive end is touching the contact and the negative end is touching the spring. If they do not touch the contacts, the transmitter WILL NOT operate. \* Check to see if the batteries are installed correctly by plugging the power lead into the transmitter. A green LED will illuminate indicating the unit is receiving power. When transmitting, the red LED indicates power is going to the transmitter.

### *Powering the Ultra-Link Wireless Video Receiver (optional)*

The Ultra-Link Video Receiver obtains its power directly from the Guardian 2000 main receive / record unit. Using the supplied cable and pin connector, align the connector with the receptacle on the side of the Guardian 2000. Once properly aligned, screw the connector clockwise to secure it in place. DO NOT force the connector or it will cause damage.

### *Connecting Cameras*

**A**fter deciding which camera to use, simply plug the camera wiring harness into the left side of the Guardian 2000 main unit. The plug is designed to fit only one way, so **DO NOT FORCE IT!** Secure the plug by twisting the bevel ring clockwise. Next, using the gold colored plug for video and the black colored plug for power, attach your camera onto the wiring harness. Lastly, cover the connectors using the supplied camouflaged covering. For adjusting the color zoom camera (optional), refer to it's operating manual.

### *Antennas*

**O**btain the Guardian 2000 receiver antenna (omni-directional, right angle UHF connector) and secure it in place by inserting the connector into its receptacle located on the back of the Guardian 2000 unit. Turn clockwise until secure. To install the seismic sensor and beam break omni-directional antennas, simply twist the antennas female BNC connector onto the sensors' housing top mounted BNC male connector.


### *Placing the Unit into Operation*

**T**he first display window shows alarm hits, battery strength, alarm duration and time/date. The second displays days left for standby and hours remaining on the tape. The days left is only a general guide. The easy to use menu has three display windows, so setup is a snap. Once the PGM button is set, the entire system shuts down and waits for the next alarm from the PIR, seismic or beam break sensor.

1. **Initialize the unit** by first placing new batteries into the sensors and testing them with the hand-held sensor alarm unit. The seismic sensor can be tested by merely holding the probe in a vertical position with the tip on the floor or table. Test the PIR by waving your hand in front of the lens until the red led illuminates. The beam break sensor can be tested by breaking the beam with your hand.
  - Record deck must be in the “ON” position.
  - Insert a new tape into the recorder. Otherwise, you cannot initialize the unit.
  - Turn the unit to the “ON INT PWR” position. The red light above the PGM (program) button will light momentarily while the data screen reads "BUSY". The screen will change to display of “RESIDUAL” indicating your battery and tape time left, and “STAT” indicating your current time and date, battery strength level, number of alarms, and duration of recording. This indicates the unit is functioning properly. No additional adjustments to the recorder are necessary.

- FWV recommends using at least a T-120 tape for proper performance. For the Sony GVD-800 recorders, a 8mm, Hi8 or Digital8 tape can be used. The larger capacity tape will result in a longer recording.
- A constant "busy" reading indicates no tape is in the recorder, the record deck is off; the tape safety lock is activated, or the unit needs charging. (See troubleshooting guide for additional details)

2. **Program the unit** by pressing the "MENU" button one time. The screen will display three menus: Program Record Set, Timer Record Set, and Date / Time Set. Cursor down to the appropriate menu using the "DOWN" button.



```

MENU
PRGM REC SET
TIMER REC SET
DATE/TIME SET
  
```

- **Set the Time and Date** by pressing the "DOWN" button to cursor to the DATE / TIME SET and press ENTER. Set the correct time for you geographic time zone using the "DOWN" and "RIGHT" buttons. When you've completed, press ENTER and the data screen will display "SAVING".
- **Set the Amount of Recording Time** by pressing the "MENU" button to PRGM REC SET. Press ENTER and the data screen will display REC DURATION. To increase the amount of recording time, press the "DOWN" button. The Guardian 2000 is pre-programmed allowing times of 5, 10, 20, 30 seconds; 1, 1.5, 2, 3, 5, and 10 minutes; or until the end of the tape (EOT), otherwise known as "One Shot Recording". Once the recording time is selected, press ENTER. The data screen displays "SAVING".

It's important to remember, as each sensor continues to receive alarms, they will continuously transmit them to the receiver and re-start the amount of recording time.

- **EXAMPLE:** An installation technician has set the recording duration for (30) thirty seconds. At 16 seconds the unit receives another alarm. The thirty second duration starts all over and will continue this cycle until no more alarms are received and the unit goes back into it's sleep mode.
- **Press the "PGM" Button** and the Guardian 2000 is now ready! The red light above the PGM button will flash indicating the unit is in the sleep mode awaiting an alarm from the deployed sensors.



## Advanced Operations

### *Programmed Timer Recording*

This enables a recording during only one window of opportunity

This unique feature allows users to program the exact time which the Guardian 2000 will record alarm activation's, e.g. 6 AM – 6 PM. Anywhere outside of that window, the Guardian 2000 simply ignores all received alarms, therefore reducing non-essential recordings and extending battery life.

1. **Set the programmed timer mode** by pressing the “MENU” button one time until the on-screen display appears

```
TIME SET
ON -- 06:12 PM ED
OFF - 06:13 PM ED
^=CHG >=RGT ENT = SELT
```

- Select the “TIMER REC SET” by moving the cursor with the “DOWN” button. Press the “ENTER” button one time.
- Set the “ON” and “OFF” times by using the “DOWN” and “RIGHT” buttons. Ensure a day of the week is selected or leave it on the default of “ED” for everyday.
- Once the times and days have been selected, press the “ENTER” button one time and the data screen will display “SAVING”.
- Once the word “SAVING” has disappeared, press the Red “PGM” button one time and wait for the unit to enter the “SLEEP” mode.

2. **Start the programmed timer mode** by pressing the “TIMER” button one time. The Guardian 2000 will “wake up” and the data screen will display “BUSY” for a short moment. The unit will automatically enter the “SLEEP” mode and both the “TIMER” and PGM” lights will flash. The Guardian 2000 will now wait until the programmed “START” time until it accepts alarms.

The unit will now start accepting alarms immediately.

3. **Activate the unit immediately** by waiting for both the "TIMER" and "PGM" lights to illuminate and press the "TIMER" button a second time. The unit will now start accepting alarms immediately and not wait for the programmed start time.

The Guardian 2000 is now ready to record alarm activated signals only within the time frame set by you !

### *Wireless Operations*

Most importantly, the risk of theft is greatly reduced and deployment is less time consuming.

By purchasing the optional wireless transmitter and receiver, your Guardian 2000 will be totally wireless! When a wireless seismic sensor, PIR sensor, or any combination activate, they transmit a radio frequency signal immediately activating the video transmitter module and selected camera. The acquired video signal is transmitted via a FCC approved high-power wireless transmitter to a receiver and the Guardian 2000 recording unit.

Distances of 500-1000 feet through wooded areas have been obtained. Most importantly, the risk of theft is greatly reduced and deployment is less time consuming.

1. **Installation of the video transmitter** is accomplished by the following sequence:
  - Attach both supplied antennas. Each antenna has a different type of connector and will only attach one way. **DO NOT FORCE THEM!**
  - Adjust the video transmitting time by using a small slotted screwdriver. The manufacturer's time is pre-set at 30 seconds. Turn the selector knob clockwise to increase the amount of transmitting time. Each "click" represents an increase in transmitting time. Time increments are set at 30 sec, 1 min, 1.5 min, 2 min, 3 min, 5 min, 10 min and End of Tape or "1 shot recording". To decrease the amount of transmitting time, simply turn the selector counter-clockwise. (see diagram, pg. 9) Keep in mind, the wireless transmitter is designed to continuously transmit a video signal as long as there are alarm activation's, just like the Guardian 2000 is designed to continue recording.
  - As discussed earlier on page 4, ensure eight (8) new "D" size alkaline batteries have been installed. After plugging the power tip into the video transmitter, a green led will illuminate indicating power is being supplied to the unit.
  - Power the selected camera by plugging it into the video transmitter. (Black to Black)
  - Plug the video connector from the camera (Gold RCA connector) into the supplied LCD monitor (must use a RCA barrel connector) unless your unit is equipped with the GVD800 and activate a sensor. This powers the camera and enables you to set your camera into position. When the transmitter is active, the red LED will light.
  - Secure the camera in place at the desired location and re-connect the video plug into the transmitter (Gold to Gold colored RCA plugs).

2. **Installation of the video receiver** is accomplished by the following sequence:

- The receiver has its' own internal antenna and should be "aimed" in the direction of the transmitter and target area.
- Point the top (identified by the surface with four screws inserted) towards the video transmitter.
- Plug the receiver into the 18pin cable and connect it to the Guardian housing on the left side

The wireless video receiver obtains its power from the Guardian 2000 and does not have any other special power requirements.



The manufacture's time is set at 30 seconds. By using a small slotted screwdriver, turn the selector switch clock-wise. Each "click" represents an increase in the amount of transmitting time. Time increments are set at 30 sec, 1 min, 1.5 min, 2.0 min, 3.0 min, 5 min, 10 min, and End of Tape or 1 shot recording. To decrease the amount of transmitting time, simply turn the selector switch counter-clockwise.

*Fig. Adjusting the transmitting time for the wireless video transmitter*

### *Using an Alternate Power Supply*

The Guardian 2000 is engineered to accept an alternate power supply such as a 12 volt deep cycle marine battery. This unique feature allows continuous use of the unit with having to recover the unit from the target area simply for recharging.

1. **Turn on the Guardian 2000** using the "ON / INT POWER" switch. Clip the battery terminal clips on the alternate power supply wiring harness to a piece of wood or similar non-conductive material. Plug the wiring harness into the side of the Guardian 2000. The connector will only go on one way – **DO NOT FORCE IT!** Attach the battery terminal clips to the respective exterior battery terminals (RED = Positive / Black = Negative or Ground). Now turn the power switch to the "ON / EXT SWITCH". The Guardian 2000 is now using power supplied by the alternate power supply.

**D**amage to the Guardian 2000 will result if the battery clips are allowed to touch each other while plugged into the unit !

# 4

## Deployment of the Guardian 2000

**Remember, a successful installation of the Guardian 2000 always includes a pre-site survey of the target area.**

We shall now discuss a few ideas to assist you in obtaining excellent identifying video and keep your equipment better concealed. Understanding not every possible situation can be discussed within these pages, or any other reference material, by following some simple guidelines, you will be much more successful. Enclosed with this manual is a Technical Surveillance Operational Plan (Appendix 1) to better assist you. Remember, a successful installation of the Guardian 2000 always includes a pre-site survey of the target area.

### *Camouflaging the Equipment*

Find an area which will most effectively hide your camera and recording unit. Bushes and trees offer great cover and concealment and greatly help camouflage the Guardian 2000 components. **DO NOT** break off fresh branches and leaves to attach to your equipment. In a few days they will be dead and stick out!

- **Debris from the ground** close to your target area can be an extremely useful tool. Bring some waterproof glue and adhere ground clippings to your equipment. It's easily removable and makes the equipment blend even better.
- **Keep the cameras off the ground** if possible. This provides a much better video depicting a more accurate depth of field.
- **Disguising the wiring** is imperative! The cabling material is black and shiny. Ensure these wires are placed under available camouflage or disguised so they will not reflect light. Use the provided cable shield to hide the gold connectors. If someone finds your wires, they can trace it to your evidence recording – unless of course you are employing the optional wireless version.

### *Lighting*

Lighting is everything when it comes to gaining identifiable video. In low light situations, use the black and white camera or the color camera during bright daylight hours. During your pre-site survey of the target area, determine which angle the sun is rising and setting. If you aim the camera into the sun, your desired image will be darkened (backlit) and probably won't be identifiable.

If you cannot determine the angles, it's extremely advisable to use a north – south view. When the sunlight is shining directly onto your target, your chances of receiving more identifiable video will rise significantly.

### *Seismic Sensor*

In most installations, this sensor will be more productive and accurate. The supplied sensor is designed to detect human footsteps averaging about 150 lb. within a 15-20 foot area. The sensor transmits a radio frequency signal up to 500 feet (line of sight) to the main unit. The transmitting antenna **MUST** be installed prior to placing batteries in the unit. **Damage will result to unit by operating it without one!**

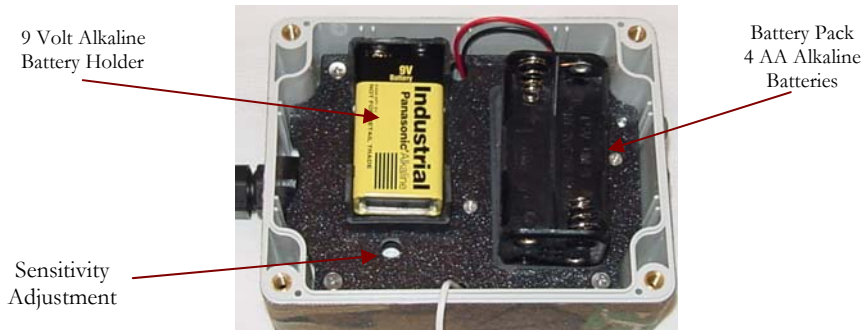
- **Soil conditions can have a great impact** on the sensitivity of this device. If the soil conditions are very moist, adjust the unit to be more sensitive. If the conditions are very dry, the ground will carry seismic waves much further and therefore the sensitivity setting can be reduced.
- **Insert the probe** at least one half to one inch below the surface. Cover the top of it with debris found in the area. When removing the probe, dig around the sensor and remove it as a whole unit. **DO NOT** pull on the sensors' wiring harness as it will permanently damage it.

**DO NOT pull on the sensors' wiring harness**

### *Adjusting the Seismic Sensor Sensitivity*

Sensitivity of the seismic sensor is adjusted by turning the white colored adjustment screw either clockwise for more sensitivity or counter-clockwise for less sensitivity. Using a slotted screwdriver, place the tip into the adjustment screw and gently turn in the desired direction. See the figure below for additional details.

**Clockwise for more sensitivity or counter-clockwise for less**



After powering the beam break sensor as previously discussed, follow these procedures for deployment:

### **Initial Set-up**

1. Obtain the hand-held sensor alarm receiver provided with your Guardian 2000 and turn it on with the buzzer activated. Set it close by so you can hear the buzzer. Have your Guardian 2000 ready as well.
2. For indoor set-up, slide the emitters' high/low switch to the low power (DOWN) position. For outdoors, slide the emitters switch to the high power (UP) position (See Fig 1). Position the emitter and the receiver at least 10 feet apart especially if working indoors.
3. Connect the three-pin emitter head (smaller head with two LED's) to the emitter housing.
4. Connect the four-pin receiver head (larger head with round opening in front) to the receiver housing.
5. Set the receiver sensitivity to an initial setting of "0" for maximum sensitivity (See Fig 2).
6. Place the receiver in the set-up mode by sliding the setup-arm switch to the setup (UP) position (See Fig 2).
7. Align the emitter head and the receiver head. The red LED on the receiver head will light and remain lit as long as the emitter and receiver are aligned and unobstructed. Should the red LED flicker on and off without being obstructed, the emitter and receiver are out of their effective range. Move them closer to each other.
8. Conduct a test of the beam break by walking through it or placing your hand in front of the receiver. The red LED will go out as soon as the beam is broken. Once the beam is unobstructed, the red LED will turn back on. The hand-held sensor alarm receiver will not turn on at this point.
9. Arm the receiver by sliding the setup-arm switch to the armed (DOWN) position. The red LED will go out and not turn back on until switched back to the set-up mode.
10. Break the beam by walking through or passing your hand in front of the receiver head. The beam break will transmit a signal and the hand-held sensor alarm receiver will buzz.
11. Now you are ready to test it with the Guardian 2000. Place your Guardian 2000 into the PGM mode. Test the beam break again and the Guardian 2000 will wake and start recording.

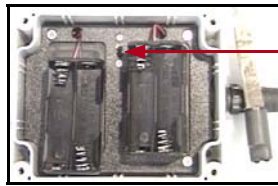


Fig 1 Beam Break Emitter

UP.....High  
DOWN.....Low

SENSITIVITY  
ADJUSTMENT  
0 ~ 3 Scale  
0 ~ Most Sens i ve  
3 ~ Least Sens i ve

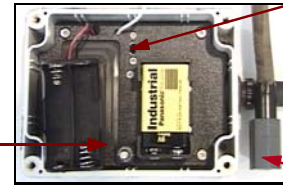


Fig 2 Beam Break Receiver

UP.....Set-up  
DOWN.....Arm

LED

### Deployment of the Beam Break Sensor:

1. Always attempt to install the beam break emitter and receiver heads facing a north ~ south direction within 30 feet of each other.
2. It is best deployed by placing the emitter head about one foot off the ground. (See Fig 3)
3. Never place the receiver head looking directly at the sun. It should be pointed directly towards the emitter head.
4. When using the beam break sensor to monitor a trail, best results are achieved when placing the emitter and receiver heads about 45° to the trail. This makes a target travel through the beam longer than a 90° setup. (See Fig 3).
5. The beam break should be solidly mounted to avoid excessive movement. Therefore, it is equipped with a small black clamp on each head to assist attaching to a solid object. Other devices such as wire ties, zip-ties, hook and loop type fasteners (Velcro®) and even natural vines can be used.

### Setting the Sensitivity:

Setting the sensitivity of the beam break is quite simple. Available settings are: 0, 1, 2, and 3. The remaining settings are not used. The sensitivity should be set according to anticipated target speed and the physical location.

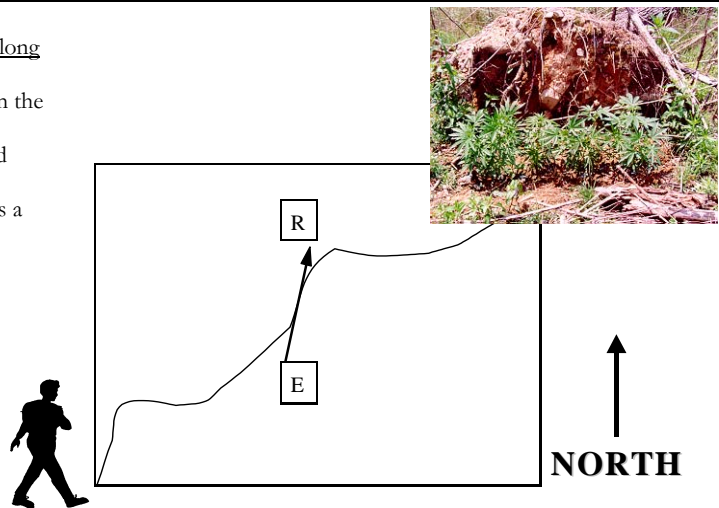
- 0-1 (most sensitive) should be used for fast moving objects such as cars on a highway, ATV's and targets moving quickly down trails.
- 2-3 Can be used for slower moving objects. Use in areas where there is a lot of small animal / bird traffic and you want to avoid having the system alarm by their movement.
- 3 (least sensitive) This is less sensitive and great for areas where a target may activate the alarm and stay in the viewed area. It should be used when placing the sensor around a specific target such as a marijuana plot, anhydrous ammonia tanks, parking lots, gate entrances, etc. These are examples of where a target is going to be for a longer versus a trail, where the target is moving quicker.

**Testing the Sensor:** Testing the sensor during deployment is crucial to success. Once the initial setup has been made, test the sensor before leaving the target area.

- Conduct several walk-through tests in the target area to determine if the speed is sufficient for the sensitivity setting. If not, adjust the sensitivity accordingly.
- Drop things such as pine cones, sticks, and similar objects through the beam to determine if it will set the sensor off. If so, adjust the sensitivity, and conduct another test.

1. Emitter is on high power and facing north along the path instead of at a 90° to the path
2. Emitter head is positioned about a foot from the ground
3. Receiver is placed about 5' above the ground and looking down towards the emitter.
4. The sensitivity setting is "3" since the trail is a heavily wooded area and target speed is anticipated slow.

Fig. 3 Sample Deployment Diagram



*Receiver / Recording Unit*

**If soil gets inside the recording device, damage will result**

The receiver and recording module of the Guardian 2000 is extremely weather resistant and durable. However, additional precautions and procedures should be used when deploying this unit.

- **When burying the unit in the ground**, place a plastic bag or similar waterproof container around the unit first. Since sealed plastic containers generate moisture, placing a small amount moisture absorber at the bottom of the bag with the main unit is advisable and can be extremely beneficial.
- **Exercise caution when extracting** the videotape from the recorder during the equipment extraction phase. All soil should be removed from the container and the technicians hands prior to opening the Guardian 2000 case.
- **The record and receiver unit** should be placed in a location where the receiving antenna is able to detect alarm activation's. By attaching an antenna extension [no more than four feet] between the antenna and housing, range and accuracy may be enhanced.



## Pre-Operational Testing

As with any investigative equipment, it should be tested and prior training conducted. William Stump & Associates highly recommends training on this equipment during both daytime and nighttime environments. Testing the equipment prior to “leaving the office” is essential to mission success. *“Prior Proper Planning Prevents Pitiful Poor Performance”*

### *Seismic Sensor*

Using the hand-held tester, turn both switches “ON” and walk around the target area. Each time the hand-held tester “buzzes”, the seismic sensor is transmitting an alarm activation signal. If the performance is satisfactory, the hand-held receiver can be put away. If not, re-position the sensor unit and re-test.

### *Beam-Break Sensor*

Once the beam break sensor is powered and is in the set-up mode, a red LED will illuminate and stay on continuously until the unit is armed. Once armed, simply break the beam by walking through it or blocking the receiver head with your hand. The hand-held receiver will activate once the beam is broken in the armed mode only. It will not activate while in the set-up mode.

### *Receiving / Recording Unit*

In accordance with previous instructions, program the unit according to mission needs and target situation. Following the completed installation and Guardian 2000 programming, conduct a final “walk-thru” test of the target area. Make a sample recording on a “test” tape and review it for proper set-up. Make any adjustments necessary, and insert a new tape into the Guardian 2000 recorder.

- Always use a test tape when installing the Guardian 2000
- Always insert a new tape for evidentiary recordings
- Always make sure the unit is fully charged prior to deployment and is well tested BEFORE you leave the office.



## Technical Specifications

The staff at William Stump & Associates constantly upgrades the Guardian 2000 outdoor surveillance system to better serve YOU, our customer. Should you not find something inside this manual or have suggestions for betterment of the system, please contact our staff.

**CASING** Steel constructed, camouflaged, weather resistant case measuring 13" x 7 1/4" x 9" which can be totally buried, rechargeable power supply with charging unit, alternate power supply cables, video wiring harness, omni-directional antenna with 90 degree UHF connector.

**RECORDER** Various 8mm, Hi8 and Digital 8 format recorders with time and date generator (TDG). Refer to provided recorder manual for exact specifications.

**CAMERAS** One 380 lines of horizontal resolution pinhole color camera, 7~15 Volt DC, 2.5 lux rating, auto iris, auto focus, housed in weather resistant, camouflaged housing measuring 1.65" sq. x 1.1". One black & white (b/w) camera with long range telephoto lens, 7~15 VDC, .5 lux rating, auto iris, auto focus, interchangeable lens capability, placed in weather resistant housing measuring 1.65" sq. x .84".

**SEISMIC SENSOR** Wireless, 6~9 Volt DC, 45 days operating capability with transmitting range of 1000 feet, totally adjustable sensitivity for range within 100 sq. ft for average 150 lb. person, encapsulated within a camouflaged weather resistant housing which can be buried.

**BEAM BREAK SENSOR** Wireless; DC operated; 20 - 30 days operating capability with alarm transmitting range of 1000 feet line of sight; adjustable sensitivity; beam range within 30 feet; housed within a camouflaged weather resistant housing which can be buried.

**HAND-HELD SET-UP DETECTION UNIT** Wireless hand-held receiver used to detect PIR and Seismic wireless sensors, powered by 9 Volt DC, notifies user by lit bulb or audible buzzer sound.

**ULTRA-LINK TX / RX SYSTEM (OPTIONAL)** High power, FCC approved Part 90, 2.4 GHz transmitter and receiver encased in weather-resistant housings.

**DAY / NIGHT CAMERA (OPTIONAL)** High resolution color camera which switches automatically during hours of darkness to Third Generation Night Vision video.

**VIDEO ZOOM (OPTIONAL)** Enables camera to automatically zoom in on a particular target detected.



## Troubleshooting Guide

Please use these techniques to correct any operating deficiencies. Should you be unable to correct the problem, contact William Stump & Associates Technical Support during normal business hours at (276) 979-1939, M-F 9 AM – 5 PM EST\ **When calling, please have the Guardian 2000 unit and it's components readily available.**

1. **“BUSY” constantly flashes on screen:** No tape in recorder. Video recorder power switch is off. Batteries are below 4 volts – recharge batteries. Videotape switched to “save” and cannot be recorded on. One fuse blown or lanc cable has loosened – call tech support services.
2. **False alarms with no recordings:** Reduce seismic sensor sensitivity; relocate sensors. Make sure beam-break has a steady red light during set-up and is not blinking. If blinking, relocate to steady red during set-up.
3. **Charger lights are inoperative:** Check fuses located inside charger and/or bottom of the Guardian 2000 unit. (DO NOT check until contact with Tech Support for additional assistance).
4. **Poor image quality on recording:** Re-adjust cameras for proper lighting control; focus telephoto lens on camera.
5. **Seismic sensor inoperative:** Replace batteries (4, AA & 1, 9V). Probe should be inserted into the ground at a 90 degree angle. Make sure probe is inserted at least 1/2 inch below earth's surface and is covered.
6. **Recorder only records for two hours:** Factory setting of 2 hours has been altered. Re-adjust to Extended Long Play in accordance with manufacture’s handbook. Digital models will only record for two hours.
7. **Sensors do not activate recorder:** Sensors are out of range from the main unit. Move closer or realign sensor and main unit antennas. Main system has lost memory. Contact tech support for programming instructions.
8. **Hand-held unit continually “Buzz’s”:** Replace battery.
9. **Batteries will not hold charge:** Batteries need replacement. Call Tech Services to arrange for battery change

10. **Record Unit Beeps:** Internal vanadium-lithium battery needs charging. After charging the Guardian 2000, turn the unit on and then slide the power switch for the recorder off (Sony EVO-250 and Sony GV-D800 and newer models only). Leave for about 24 hours.
11. **Unable to obtain quality evidence recording:** Didn't Use the Guardian 2000 !



## Warranty Information

The limited liability stated herein is subject to all of the following terms and conditions.

### *Terms and Conditions*

1. **Notification of Claims; Warranty Service:** If Purchaser believes the product is defective in material or workmanship, then written notice with an explanation of the claim shall be given promptly by the Purchaser to William Stump & Associates, LTD within the warranty period. No repair or replacement of any product or part thereof shall extend the warranty period. The specific warranty on the repaired part shall be in effect for a period of ninety (90) days after repair or replacement, or the remainder of the original warranty, whichever is longest.
2. **Exclusive Remedy; Acceptance:** Purchaser's exclusive remedy and William Stump & Associates, LTD sole obligation is to supply all labor necessary to repair any product found to be defective within the warranty period. Purchaser's failure to make a claim as provided in section 1 above or continued use of the product shall constitute an unqualified acceptance of such product and a waiver by Purchaser of all claims thereto.
3. **Exceptions to Limited Warranty:** William Stump & Associates, LTD shall have no liability or obligation to Purchaser with respect to any product requiring service during the warranty period, which is subject to any of the following: abuse, improper use, negligence, accident, modification, failure of the end user to follow the operating and maintenance procedures outlined in the user / service manual(s), attempted repair by unauthorized or non-qualified personnel, operation of the product outside the published environmental and electrical parameters, or if security seal has been altered, defaced, or removed. William Stump & Associates, LTD also excludes from warranty coverage, products located outside the United States, and consumable items such as, but not limited to, batteries and fuses. Items not manufactured by William Stump & Associates, LTD, but included in the system bought by Purchaser are limited to the original manufacturer's warranty and will be repaired by William Stump & Associates, LTD on a cost of material basis.
4. **Proof of Purchase:** The Purchaser's dated invoice must be retained as evidence of the date of purchase and to establish warranty eligibility.

*Disclaimer of Warranty*

EXCEPT FOR THE FOREGOING WARRANTIES, WILLIAM STUMP & ASSOCIATES, LTD HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND /OR ANY WARRANTY WITH REGARDS TO ANY CLAIM OR INFRINGEMENT THAT MAY BE PROVIDED IN SECTION 2-312(3) OF THE UNIFORM COMMERCIAL CODE AND/OR ANY OTHER COMPARABLE STATE STATUTE. WILLIAM STUMP & ASSOCIATES, LTD HEREBY DISCLAIMS ANY REPRESENTATION OR WARRANTY THAT THE PRODUCT IS COMPATIBLE WITH ANY COMBINATION OF PRODUCTS NOT MANUFACTURED BY WILLIAM STUMP & ASSOCIATES, LTD.

*Limitation of Warranty*

THE LIABILITY OF WILLIAM STUMP & ASSOCIATES, LTD, IF ANY, AND PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DAMAGES FOR ANY CLAIM OF ANY KIND WHATSOEVER, REGARDLESS OF THE LEGAL THEORY AND WHETHER ARISING IN TORT OR CONTRACT, SHALL NOT BE GREATER THAN THE ACTUAL PURCHASE PRICE OF THE PRODUCT WITH RESPECT TO WHICH THE CLAIM IS MADE. IN NO EVENT SHALL WILLIAM STUMP & ASSOCIATES, LTD BE LIABLE TO PURCHASER FOR ANY SPECIAL, INDIRECT OR INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO, COMPENSATION, REIMBURSEMENT, OR DAMAGES ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS OR FOR ANY OTHER REASON WHATSOEVER.

# Appendix 1

## *Technical Surveillance Operational Plan*

### A. Pre-Operational Plan

1. Court order obtained (If applicable)
2. Consent form authorizing the installation and/or intercept (If filming on private property)

### B. Identify all installation technicians

### C. Ensure all equipment is serviceable and tested prior to deployment

### D. Ensure technicians use an installation plan including:

1. Identification of all members involved
2. Types of devices to be installed
3. Specific location where equipment is to be used or installed.
4. Photograph, videotape, and/or sketch installation of equipment (Pre-site Survey)
5. Identify transportation requirements
6. Identify communications requirements
7. Have a cover story well established in case of surreptitious installation. Why are you in the area you are ?
8. Protective surveillance requirements – do you have physical surveillance set up during installation ?
9. Contingency plans.
10. Necessary technical surveillance specialist tools

E. Ensure technicians prepare an installation report which should include:

1. Videotape, photograph or sketch the exact location of the installation. This is an absolute!
2. Exact description of the devices employed, power supplies used, wire runs, concealment details, operating frequencies, antenna placement and orientation, any articles removed from the target location, and any installation problems encountered
3. Narrative, sequential style removal plan
4. Extensions or amendments to court orders or voluntary consents
5. Narrative style report of any secondary entries and exits for repair, replacement, etc., of devices
6. Date of equipment removal
7. Any problems encountered during equipment removal
8. Post operation evaluation on productivity of the installation / intercept.

F. Post-Operation Recovery

1. Cleaning of Equipment
2. Preventive Maintenance, Checks and Services conducted IAW manufacturers guidance
  - a) Brush dirt off all exposed parts
  - b) Remove all debris from inside main record / receive unit
  - c) Remove all batteries from sensors and video transmitter & receiver
  - d) Discharge and charge main unit at least monthly during periods of non-use
  - e) Clean all connectors and check for bends, cracks, deterioration
  - f) Clean and inspect all antennas for bends, cracks, deterioration
3. Store equipment in a cool, dark, dry location and absolutely not on a bare concrete floor.