INSTALLING *SECURE*FLIGHT

The major steps in installing the *Secure*FLIGHT system are:

1. Assembling the screening tower
2. Wiring the tower
3. Grounding the tower
4. Initializing the tower and monitor
5. Setting up the computer network

Pre-Installation Requirements

The screening tower requires some facility modification prior to installation. Viisage ships a base plate with each tower that must be securely bolted directly to the floor. A template for floor mounting is available from Viisage.

Assembling the Tower

Viisage ships the screening tower with the upper and middle sections pre-assembled. During installation, you will mount the lower section to a base plate in the floor and mount the upper/middle section onto the lower section.

Note: Most installations will have a base plate securely mounted to the floor prior to tower installation. If you do not have a base plate pre-installed, contact Viisage Technology for instructions on anchoring the base plate.

Carefully unpack the tower components and make sure you have the following for each tower unit:

- Upper/middle tower section
- Lower tower section
- Six tower-mounting screws
- Key for tower cover locks
- Two light bulbs
- External cables for electrical power, video, and serial communication
- Tower base plate (may be pre-installed)

Tools required:

- Socket wrench with a 9/16" socket
- 3" socket extension (recommended)

To assemble the screening tower:

1. Unlock and remove the cover of each tower section by tilting the cover and lifting the bottom away from the tower section. (See Figure 3.)

2. Position the lower tower section over the base plate. (See Figure 4.) The four bolt holes at the corners of the base plate are used for anchoring the plate to the floor. You will use the six screw holes for securing the tower section to the plate.

3. Thread the six tower-mounting screws through the base of the lower section into the base plate and tighten using the 9/16" socket wrench.

Figure 3
Removing the covers to help with lifting and handling the tower sections.

Figure 4
Setting the lower tower section down over the base plate.

4. Remove the hex nuts from the five stud screws holding the colored spacer ring onto the base of the middle/upper tower section. (See Figure 5.)

5. Holding the spacer ring in place, place the upper/middle tower section onto the lower section. Be sure to align the five screws while joining the sections. (See Figure 6.)

Figure 5
Removing nuts from the spacer ring.

Figure 6
Supporting the spacer ring and aligning screws to set upper/middle section onto lower section.

CAUTION:
The combined upper/middle tower sections weigh approximately 45-50 lbs. Viisage recommends using two people for safe lifting and positioning. Be sure to hold the spacer ring and align the tower section vertically to avoid damaging the screws.

6. Thread the nuts onto the five screws extending through the top of the lower tower section and tighten using the 9/16" socket wrench.

7. Install two light bulbs into the sockets in the top section.

Wiring the Tower

All power cables for the internal components of the tower connect to a power strip mounted inside the lower section. The main cables for power, communication, and video exit the tower through connections in the bulkhead.

To wire the screening tower internally:

1. Locate the two power cables for the lights. Starting from the middle section, feed the cables to the bottom section of the tower, passing through the spacer ring. Plug the cables into the power strip located in the lower section, using the back row of receptacles.

2. Repeat Step 1 with the power cable for the video monitor.
   Note: The power cable for the video monitor includes a power supply securely mounted inside the tower wall.

3. Repeat Step 1 with the power cable for the video camera.
   Note: The power cable for the video camera includes a power supply securely mounted inside the tower wall.

4. Locate the video cable from the camera. Starting from the middle section of the tower, feed the cable through to the bottom, passing through the spacer ring and behind the power strip. Connect the BNC cable end to the inside of the bulkhead at the base of the bottom section. (See Figure 7.)

5. Locate the RS-232 cable shipped with the tower. Plug one end of the cable into the DB-25 connector in the tower controller board located in the middle tower section. (See Figure 8.) Feed the cable through the spacer ring and behind the power strip. Connect the other end of the cable into the DB-25 connector on the inside of the bulkhead.
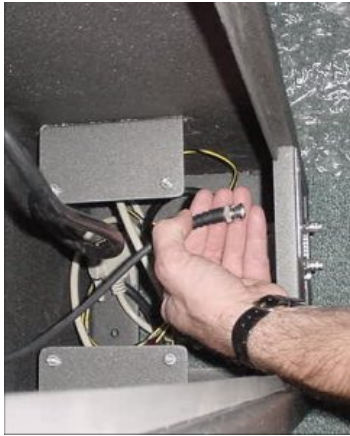
Figure 7
Connecting the video
cable to the tower output
in the bulkhead.

Figure 8
Connecting the DB-25 cable
to the tower controller
(printed circuit) board.

6. Feed the power cord and transformer from the tower controller board to the bottom section of the tower, passing through the spacer ring. Plug the transformer into the front row of receptacles in the power strip.

7. Nest all internal cables in the base of the middle section.

To wire the tower externally:

1. Connect the twist-locking power cable to the Power connection on the outside of the bulkhead. Plug the other end of the power cable into the UPS provided with your *Secure*FLIGHT system. (See Figure 9.)

2. Connect the RS-232 (serial) communication cable to the DB-25 connector on the outside of the bulkhead. Plug the other end into the COM port of the Lane PC. (See Figure 9.)

3. Connect the video cable to the Video Out connector on the outside of the bulkhead. Plug the other end into the framegrabber port on the Lane PC. (See Figure 9 and Figure 10.)

Figure 10
Connecting video cable to frame grabber board on Lane PC.

Figure 9
Connecting external cables for (left to right) power, serial communication, and video. Video In connection is not in use.

Grounding the Tower

The tower is connected to electrical ground through the 115 VAC power outlet in the bulkhead. Each section of the tower is grounded to the adjacent section through green grounding cables that are securely connected to permanent grounding posts.

The grounding posts are located on the right inside wall of the tower sections and are identified by green symbols, as shown in Figure 11.

Figure 11
Grounding post in the lower section of tower with cable securely connected.

Used only in top bulkhead configurations

Grounds top section to middle section (factory-installed)

Grounds middle section to bottom section. (Restore this connection during assembly.)

Grounds bottom section to 115 VAC ground at bulkhead. (Factory-installed. Do not remove unless changing bulkhead configuration.)
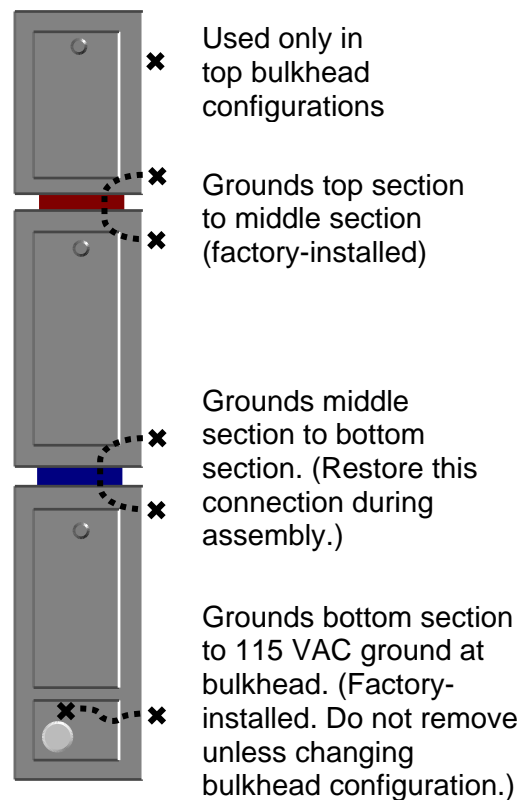
Figure 12
Back view of tower showing location of grounding posts and cables

When the tower is shipped in two parts, the grounding cable between the parts is disconnected. When you mount the upper/middle section onto the lower section, you must reconnect the cable.

In addition, check each section of the tower to ensure that all grounding cables are in place and securely connected to the posts. Figure 12 shows the location of the grounding cables.

Caution: You must connect all grounding cables to prevent risk of personal injury and equipment damage due to electrical shock.

Initializing the Tower and Monitor

After you have assembled and wired the tower, complete the installation by turning on the main power, starting and adjusting the video monitor, and replacing the covers.

Note: You will need the key for the tower cover locks to initialize the video monitor.

To switch on the main power:

1. Press the power button on the front of the power strip in the lower section.

   Note: an access hole in the lower section cover enables you to push the button without opening the cover.

To switch on and adjust the video monitor:

1. Get the remote controller from its holder in the middle section of the tower. (See Figure 13.)

2. Standing in front of the tower, press the ON button on the remote controller to switch on the video monitor.

   If you do not want to make any adjustments to the video display, skip the following steps and continue at step 8.

3. Press the Select button on the remote controller. The Contrast level displays on the monitor. Use the remote controller's Up and Down buttons to adjust the contrast.

4. Press the Select button on the remote controller again. The Brightness level displays on the monitor. Use the remote controller's Up and Down buttons to adjust the brightness.

Video Monitor Controller

Figure 13
Video monitor remote controller in its storage position in the middle tower section.

5. Press the Select button on the remote controller again. The Color level displays on the monitor. Use the remote controller's Up and Down buttons to adjust the color.

6. Press the Select button on the remote controller again. The Tint level displays on the monitor. Use the remote controller's Up and Down buttons to adjust the tint.

7. Press the Select button on the remote controller once more to turn off the adjustment display.

8. Return the remote controller to the storage location.

To replace the tower covers:

Reinstall and lock the tower section covers.

To switch off the main power:

- Press the power button on the front of the power strip in the lower section.

   Note: In many installations, the tower will remain on at all times. Follow your organization's procedures for switching the power on and off.

Setting Up the Computer Network

The diagrams in Figures 14 and 15 illustrate the connections between components for multi-lane and single-lane checkpoint configurations. These are the most common configurations.

Other configurations are possible, such as Lane PCs located at the towers with Operator Consoles at a remote location. In this scenario, each Lane PC would have a dedicated keyboard, monitor, and mouse.

Please contact Viisage Technology if you have questions about alternate configurations.
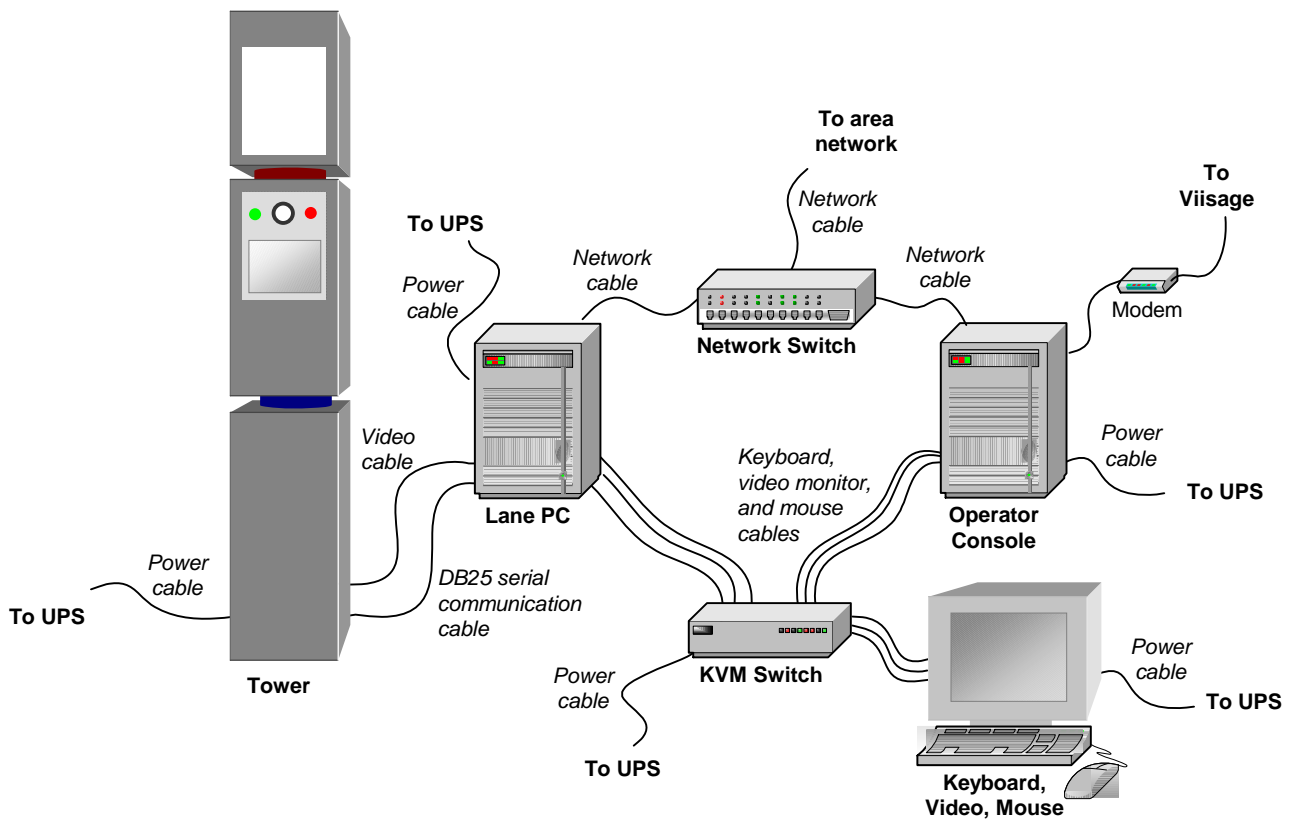
**To area
network**

*Network
cable*

**To
Viisage**

To UPS

*Power
cable*

*Network
cable*

*Network
cable*

Modem

*Network
cable*

Network Switch

*Power
cable*

To UPS

*Video
cable*

*Keyboard,
video monitor,
and mouse
cables*

Lane PC

**Operator
Console**

*Power
cable*

To UPS

*DB25 serial
communication
cable*

Tower

*Power
cable*

KVM Switch

*Power
cable*

To UPS

*Power
cable*

To UPS

**Keyboard,
Video, Mouse**

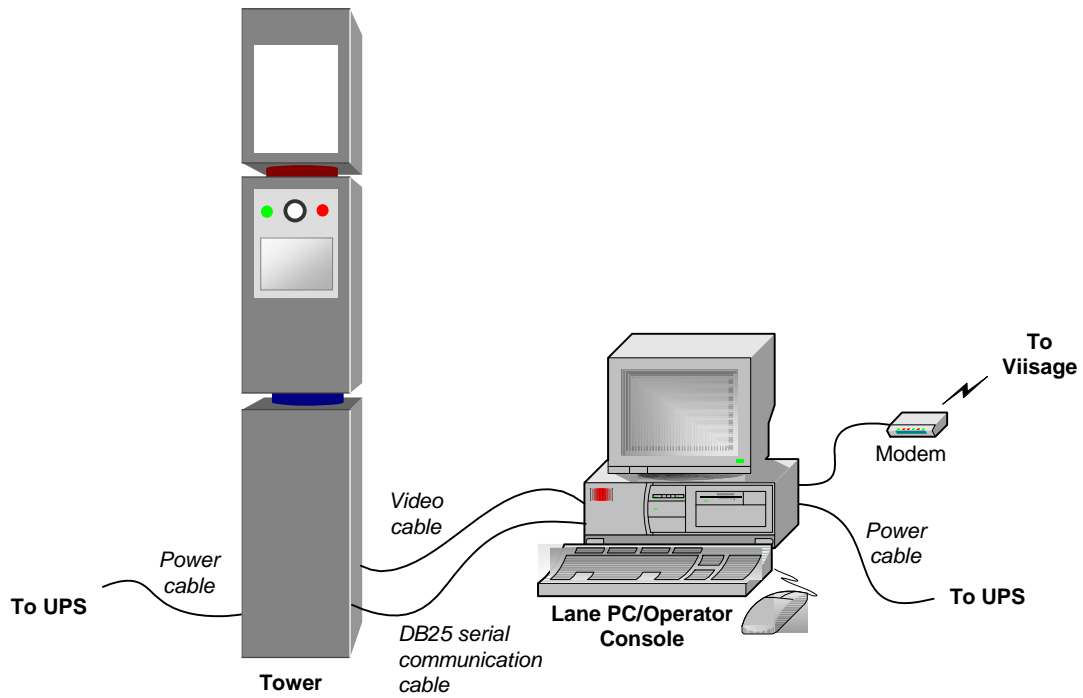**Figure 14**   Cabling Diagram for Multiple Lane Checkpoint Configuration

Figure 15   Cabling Diagram for Single Lane Checkpoint Configuration