Installation and Operation Manual

STI 8 Channel Wireless Monitor™

Model: STI-34108

Thank you for purchasing this fine product. We want you to know that your satisfaction is very important to us. We suggest you take the time to read this manual carefully to get the most from your new product.

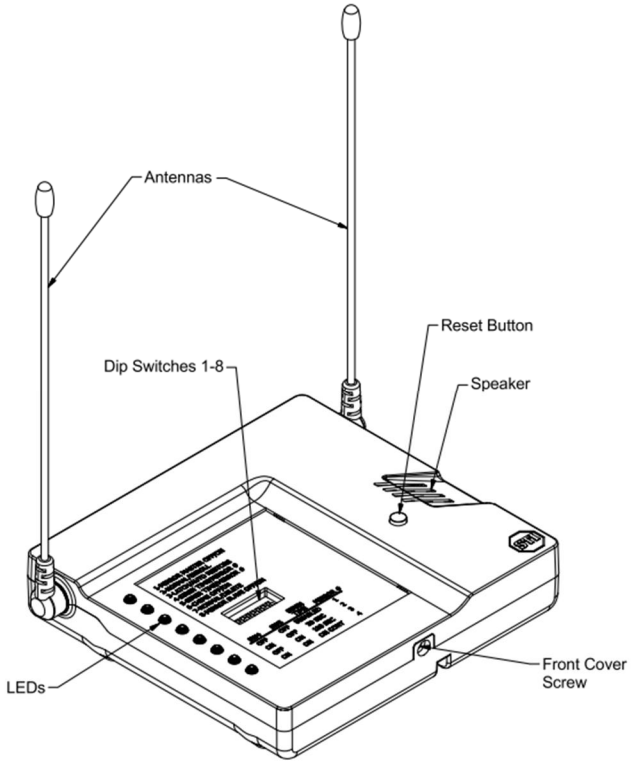
HOW THE PRODUCT WORKS

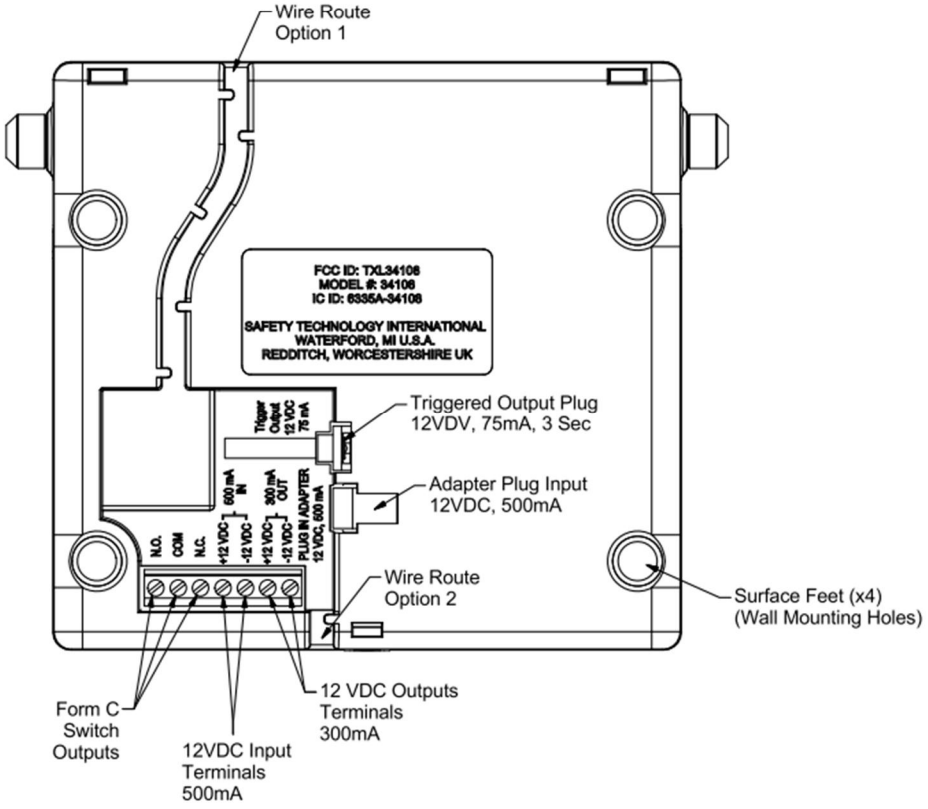
STI offers multiple wireless products designed to alert you of several different conditions. The STI 8 CHANNEL WIRELESS MONITOR allows you to monitor up to 8 different STI devices at a single convenient location. When placed in Enroll Mode, it allows you to select 1 of 8 different zones that will represent your STI device(s) best, and enrolls it when the monitor detects the STI device's wireless signal. The STI wireless device family uses a system that also ensures other devices that are not from STI will not get enrolled or detected. So there are no concerns about accidental enrollment, alerts or crosstalk. The STI 8 CHANNEL WIRELESS MONITOR allows you to select turning on a siren, sounding a chime, triggering a normally open or normally closed switch, or turning on an external 12 VDC output. It also allows you to choose which devices shall have latching, when selected during enrollment.

The STI 8 Channels Wireless Monitor also acts as a repeater when paired with other STI 8 CHANNEL WIRELESS MONITORS to receive wireless transmissions over long distances or around disruptive terrain.

BEFORE YOU START

Refer to these drawings to become familiar with all the parts.





Switch, Indicator and Plug Descriptions:

DIP Switches (1-8) - The following information is written on the receiver. Below is a description of the DIP switch usage.

1-MIRROR MASTER OFF/ON
2-NORMAL/ENROLL
3-AUTO RESTORE/LATCH
4-SIREN TIME/MIRROR#
5-SIREN TIME/MIRROR#
6-CHIME OFF/ON
7-NORMAL/DELETE
8-MIRROR SLAVE OFF/ON

SW4	SW5	SIREN TIME	MIRROR#
OFF	OFF	DISABLED	1
ON	OFF	30 SEC	2
OFF	ON	180 SEC	3
ON	ON	ON CONT	4

8 CHANNEL RECEIVER - SWITCH DESCRIPITIONS

	DESCRIPTION	ON (Switch UP)		OFF (Switch DOWN)	
SW1	MASTER RECEIVER SETTING	ENABLED		DISABLED	
	(Only active when SW8 = ON)	Switch on only for Mirror Master		Switch off if not Mirror Master	
SW2	ENROLL DEVICES	ENABLED		DISABLED	
		LED for zone number waiting to enroll blinks.		Normal Operation	
		Button used to change zone to be enrolled.			
SW3	ALARM LATCHING	ENABLED		DISABLED	
	(Only active when SW2 = ON	LED blinks after sensor is triggered		LED turns on when triggered	
	and sensor gets enrolled)	and turns off upon button press.		and turns off after 3 seconds.	
SW4	RECEIVER # / ALARM TIME	RECEIVER# (when SW8 = ON)		ALARM TIME (when SW8 = OFF)	
and				Note: Alarm will also turn off upon button press.	
SW5	ON = 1	(SW4)(SW5)	00 = Mirror #1	(SW4)(SW5)	00 = 0 Second (Silent)
	OFF = 0		10 = Mirror #2		10 = 30 Seconds
			01 = Mirror #3		01 = 180 Seconds
			11 = Mirror #4		11 = Continuously ON
SW6	RECEIVER CHIME	ENABLED		DISABLED	
		Chime sounds when device is triggered.		Chime does not sound when deivce is triggered.	
SW7	DELETE DEVICES	ENABLED		DISABLED	
		All LEDs turn red. LED blinks for zone to be		Normal Operation	
		deleted. Hold button for 10 seconds to delete.			
SW8	MIRROR MODE	ENABLED		DISABLED	
		Enables Mirror Mode. Enables SW1.		Disables Mirror Mode. Disables SW1.	
		SW4/5 indicate RECEIVER#.		SW4/5 indicate ALARM TIME.	
		Turns on RECEIVER# (SW4/5) transmissions.		Turns off mirrored transmissions.	

Push Button - Selects zone to enroll or delete, acknowledge latched alert (resets LED to GREEN), silences alarm.

LEDs (1-8) - Each enrolled sensor or mirrored receiver has an LED that indicates the current state of that zone from the top LED (Zone 1) down to the bottom LED (Zone 8). The Zone states are:

- LED GREEN = Zone Normal
- LED RED = Zone Alarm
- LED RED (flashing) = Zone Latched (zone was in alarm and returned to normal)
- LED AMBER = Sensor Trouble (battery or sensor tamper trouble detected)
- LED off = Zone not enrolled

Sounder - Audio feedback for alarm, chime, zone enrollment and deletion.

Adapter Plug Input - Input connector 12VDC, 500mA, center positive adapter (provided).

Triggered Output Plug - 12VDC output connector. Activates with 12VDC, 75mA max. for 3 seconds when zone is triggered. Designed for use with STI Lamp Controller (STI-30104 sold separately).

Terminal Descriptions:

Form C Switch Outputs (Dry Contacts)

N.O. - Normally open circuit to COM terminal. Closed to COM when alarm is triggered.
COM - Common return between N.O. or N.C.
N.C. - Normally closed circuit to COM terminal. Open to COM when alarm is triggered.

12VDC (500mA) Input

+12VDC - Positive voltage input. Power Input circuit rated to 500mA current.
-12VDC - Negative voltage input.

12VDC Output (300mA max.)

+12VDC - Positive output voltage. 300mA maximum output current.
-12VDC - Negative output voltage.
A continuous 12VDC output is produced only while sounder is activated.

INSTALLATION GUIDE

Surface Installation:

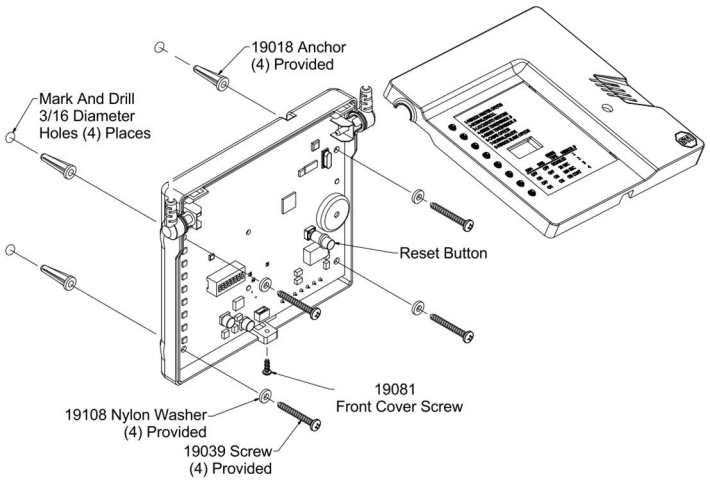
1. Ensure mounting screws are removed.
2. Insert rubber feet (provided) into holes on bottom cover
3. Route wires under the product.

If using for the first time or for enrollment adjustments, follow **Zone Enrolling** instructions. Otherwise, STI 8 CHANNEL WIRELESS MONITOR should be fully functional.

Wall Mounted Installation:

1. Ensure rubber feet are removed
2. Remove front cover screw
3. Remove cover (be careful not to lose push button)
4. Mark mounting holes on wall using bottom cover as template
5. Drill holes with 3/16" drill bit
6. Insert wall anchors (provided)
7. Insert power cord and wires and route on the back
8. Insert mounting screws (provided) into plastic washers (provided)
9. Insert mounting screws into PCB holes through back of cover
10. Insert mounting screws into wall anchors and tighten
11. Press fit push button onto the push button switch on the circuit board
12. Insert top cover tabs into bottom cover slots
13. Carefully, close top cover ensuring the push button inserts into cover hole and antennas rest in the side cover groves.
14. Insert front cover screw and tighten
15. Plug in AC adaptor

If using for the first time or for enrollment adjustments, follow **Zone Enrolling** instructions. Otherwise, STI 8 CHANNEL WIRELESS MONITOR should be fully functional.



OPERATING INSTRUCTIONS

Zone Enrolling:

The STI 8 Channel Receiver is designed to receive ONLY wireless signals from products in the *STI Wireless Family of Products* (See Back of the Installation Instructions). The STI 8 Channel Receiver allows you to enroll up to 8 devices into zones 1 thru 8 of the receiver. The STI 8 Channel Receiver will enroll from the different sensors directly or by enrolling other mirrored STI 8 Channel Receivers. The STI 8 Channel Receiver also enrolls up to 2 keyfobs.

When ENROLL mode is enabled DIP SW2 (ON), the LEDs for any currently enrolled zones will turn RED to indicate that these zones are not available. The LED will flash GREEN to indicate the zone to be enrolled. Press the push button to change to a different zone to be enrolled. The next available zone will have the flashing GREEN LED. The receiver will not allow enrollment in an occupied zone.

The receiver will not enter ENROLL mode while it is in DELETE mode, i.e. DIP SW7 (ON).

Zone Latching:

A zone will have "latching" when DIP SW3 (ON) at the time of enrollment.

"Latching" shows a zone alert was triggered and the alert has been cleared since then. When a zone is in the "latched" status, the zone LED will flash RED. For example, when a door sensor has been opened and closed, the zone LED will flash RED to indicate the door was opened previously, but is no longer opened.

The latching is released when the user presses the push button to indicate acknowledgement of the alert. When the "latched" status is released, the zone LED will change back to continuous GREEN. If the zone has another alert before the "latched" status is released, the LED will change to continuous RED in the alert state, and then back to flashing when the alert is cleared.

If Zone Latching is not selected at the time of enrollment DIP SW3 (OFF), the zone LED will change from continuous RED back to continuous GREEN when the alert has been cleared.

Enrolling Sensors:

1. First check that the module is not in DELETE mode, DIP SW7 (OFF).
2. If the zone should have "latching", set DIP SW3 (ON).
3. Enable ENROLL mode, set DIP SW2 (ON).
4. Check that the zone flashing GREEN is correct, and note the zone(s) with RED LEDs.
5. Change the status of the sensor to be enrolled by triggering an alert on the sensor and return it to the non-triggered state (if done manually).
6. The receiver will give a double beep and the zone LED will change to continuous RED.
7. Repeat steps 2-6 to enroll another sensor.
8. To exit ENROLL mode, set DIP SW2 (OFF).

Sensor Installation Tip:

- When first enrolling a sensor, set the "latching" on, DIP SW3 (ON), and bring the sensor to the STI 8 CHANNEL WIRELESS MONITOR location to enroll it before mounting

the sensor. Then, mount the sensor at its intended location and trigger an alert on the sensor. Check that the zone on the STI 8 CHANNEL WIRELESS MONITOR to see it is continuous RED or flashing RED, which means it received the sensor's signal. Then, if latching is not desired, delete that zone (see **Zone Deleting**) and enroll the sensor again without latching, DIP SW3 (OFF), from it mounted location.

Enrolling Mirrored (multiple) Receivers:

1. First check that the module is not in DELETE mode, DIP SW7 (OFF).
2. If the zone should have "latching", DIP SW3 (ON).
   NOTE: With mirrored receivers, latching must be set during ENROLL mode on each receiver that will use the latching feature. Mirrored receivers will not duplicate the latched settings on the Master unless they are enrolled with latching.
3. Configure SW4 and SW5 to select the mirror number 1-4 if not the master (See ***Switch, Indicator and Plug Descriptions*** or the receiver cover).
4. Enrolling mirrored receivers is performed in sequential pairs:

Pair	Column A		Column B
1	Master	=>	Receiver 1
2	Receiver 1	=>	Receiver 2
3	Receiver 2	=>	Receiver 3
4	Receiver 3	=>	Receiver 4

   NOTE: All sensors are enrolled only to the Master receiver. The mirrored receivers copy the Master receiver's output (except latch settings) sequentially thru Receivers 1 - 4.
5. Set DIP SW1 and SW8 (ON) on the Master receiver.
6. Set DIP SW8 (ON) on each mirrored receiver.
7. Enable ENROLL mode, DIP SW2 (ON), on the receivers being paired together.
8. Press and release the push button on the Column A receiver (above). The Column B receiver will give a double beep.
9. Press and release the push button on the Column B receiver (above). The Column A receiver will give a double beep.
   NOTE: If the Column B receiver was previously enrolled to the Column A receiver and was not deleted, the Column A receiver will not double beep, but will work properly.
10. Disable ENROLL mode, DIP SW2 (OFF).
11. Press and release the push button of the Column A receiver (above). The LED's of the Column B receiver will light in the same configuration.

Enrolling Keyfobs:

1. First check that the module is not in DELETE mode, DIP SW7 (OFF).
2. Enable ENROLL mode, set DIP SW2 (ON).
3. Press a button on the keyfob.
4. The receiver will give a double beep. Keyfobs will not be assigned to a zone LED.
5. Repeat steps 2-4 to enroll another keyfob.
6. To exit ENROLL mode, set DIP SW2 (OFF).

NOTE: The STI 8 Channel Receiver will only operate with 2 keyfobs at a time. If a third keyfob is enrolled, the keyfob enrolled first will be deleted.

Zone Deleting:

Sensors or Mirrored Receivers:

1. Enter DELETE mode, DIP SW7 (ON). All enrolled zone LEDs will turn RED.
2. The first zone to be deleted will have the LED flashing RED.
3. Press and release the push button to cycle the flashing LED through the zones until it reaches the zone to be deleted.
4. To delete a single zone, press and hold the push button to delete the zone with the flashing LED for 3 seconds. The receiver will give a single beep and the LED will turn off.
5. To delete all zones at once (including all enrolled keyfobs and the mirrored receiver), press and hold the push button continuously. The first zone will be deleted first. Afterwards, all other enrolled zones will flash for 3 seconds and then be deleted. The receiver will give a single beep for the first deleted zone and a double beep the other zones are deleted. All of the LEDs will turn off when the zone is deleted.
   NOTE: You must delete all the zones at once to delete the keyfobs and/or the mirrored receiver.

BASIC OPERATION

The STI 8 CHANNEL WIRELESS MONITOR receives 433 MHz radio signals from numerous STI brand sensor types enrolled to one of 8 zones on the monitor. It provides feedback to the user in the form of LED colors, onboard sounder annunciation, onboard sounder siren, switched on or off output terminals (Form C contacts), a 3 second 12 VDC @ 75mA max. output on the Triggered Output Plug, and 12 VDC output terminals that are powered at the same time as the onboard sounder.

LED Operation:
LEDs perform as follows:

LED OFF	-	Zone not enrolled
Green LED	-	Zone enrolled, Normal and Non-Triggered status
RED LED	-	Zone enrolled, Alert status
Blinking RED LED	-	Zone enrolled, Latched and Non-Triggered status
Amber LED	-	Zone enrolled, Tamper Alert and Non-Triggered status

The LED maximum to minimum precedence order is RED, Blinking RED, AMBER, GREEN, OFF. An LED status with higher precedence is emitted by the LED.

Onboard Sounder/Siren/Chime Operation:
If any **Siren Mode** is set, SW4 and/or SW5 (ON), then the onboard sounder will give a 4 KHz @ 90dB sound for the Siren Mode time set when any zone alert signal is received.
NOTE: Chime mode must be turned off, SW6 (OFF), for the Siren mode to activate.

If **Chime Mode** is set, SW6 (ON), then the onboard sounder will sound a double beep when any zone alert signal is received.
NOTE: Chime mode must be turned off, SW6 (OFF), for the Siren mode to activate.

12VDC Output Terminals:
The 12VDC Output Terminals will turn on for the same period as the Onboard Sounder in Siren or Chime Mode when any zone alert signal is received. The rated current draw is 275mA.

12VDC Triggered Output Connector:
The 12VDC Triggered Output will turn on for 3 seconds when any zone alert signal is received. The rated current draw is 75mA.

Form C Terminals:
The Form C terminals are labeled "N.O.", "COM", "N.C." for Normally Open, Common, and Normally Closed, respectively.

When any zone has an Alert signal received and the LED changes to continuous RED, a short circuit is made between the NO and COM, and an open circuit is made between NC and COM. As soon as ALL zones are not in Alert mode and the each LED is no longer continuous RED, an open circuit is made NO and COM, and a short circuit is made between NC and COM.

Sensor Operation:
A sensor sends a 433 MHz radio signal to the receiver that will indicate one or more of the following: Alert Triggered; Restored To Normal; Sensor Tampering; Low Battery; Lost Signal

Mirrored Receiver Operation:
The LEDs, the sounder, the siren time and the 12VDC output will duplicate the sensor settings as they are enrolled on the Master Receiver. If LED "latching" is desired on the mirrored receiver, this must be selected at the time of the mirrored receiver's enrollment.

NOTE: If a sensor is enrolled to a mirrored receiver that is not the Master, the next transmission of the Master will override that sensor's LED status.

Keyfob Operation:
An STI Keyfob can be used to remotely turn on / off the LEDs, sounder, and output on the STI 8 Channel Receiver to which it has been enrolled. The STI 8 Channel Receiver will continue to monitor the sensor signal inputs, however, even when these features have been deactivated by the keyfob.

Low Battery / Tamper Detection / Out of Range TRANSMITTER Alerts:
If the battery is too weak, something has triggered a tamper alert signal from the TRANSMITTER, or the TRANSMITTER has been out of range between 12 - 24 hours, the zone LED will light AMBER to alert a need for attention to that device.

The LED will continue in this state until either:

1. the TRANSMITTER sends a restored normal message to the RECEIVER
2. the TRANSMITTER is detected by the RECEIVER
3. the TRANSMITTER is cleared from the RECEIVER memory
4. the RECEIVER loses power and has not restored the alert message yet.

IMPORTANT NOTICE:
This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna
-Increase the separation between the equipment or devices
-Connect the equipment to an outlet other than the receiver's
-Consult a dealer or an experienced radio/TV technician for assistance

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Safety Technology International, Inc. could void your authority to operate this equipment.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

This product meets the applicable Industry Canada technical specifications. Le présent materiel est conforme aux specifications techniques applicables dôIndustrie Canada.

Model: 34108
FCC ID: TXL34108
IC: 6335A-34108

OPTIONAL LAMP CONTROLLER ACCESSORY
The lamp controller will turn on a lamp any time your STI 8 CHANNEL WIRELESS MONITOR is triggered. Never come home to a dark house again, and let others think you are home when you aren't.
The Lamp Controller works with both the STI-34150 (battery) and the STI-34100 (solar) models.

WARNINGS
FOR INDOOR USE ONLY. This unit CANNOT be used with 3-prong grounded plugs. Do not connect RECEIVER to any heat producing device. Keep RECEIVER away from water and/or damp areas. To prevent electric shock, match wide blade of plug to the wide slot of outlet and insert completely.

When using lamp controller option, use ONLY 200 Watt or less incandescent lamps, and keep lamp away from bed coverings, curtains or other flammable materials as this may present a fire hazard.

WARRANTY INFORMATION:
Safety Technology International, Inc. warrants to the **original** consumer/purchaser that this product shall be free of defects in material and workmanship under normal use and circumstances for a period of one (1) year from the original date of purchase.

STI Wireless Family Products

STI-	**Keyfob**
STI-30104	Lamp Controller
STI-34065	STI Stopper Station
STI-34070	STI Exit Retro PCB (add wireless to certain STI Products)
STI-34101	STI Solar Powered Driveway Monitor
STI-34103	Voltamax 12 VDC (100mA) Power Supply
STI-34104	STI 4 Channel Wireless Monitor
STI-34105	Voltamax 12 VDC (500mA) Power Supply
STI-34108	STI 8 Channel Wireless Monitor
STI-34151	STI Battery Powered Driveway Monitor
STI-34201	STI Mailbox Alert
STI-34301	STI Garage Sentry
STI-34401	STI Universal Sensor
STI-34501	STI Pool Gate Alert