

# Glasstrek II

## 456

### Version 2.20

## INSTRUCTION MANUAL



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Thank you for selecting the Glasstrek "glass break" detector, designed for professional security applications. Please follow the instructions in this manual carefully to optimize use of your Glasstrek detector, which has been 100% quality control tested to ensure proper operation and unit durability.

Glasstrek's innovative Model 456 incorporates state-of-the-art audio frequency glass break detection and infra-sound impact analysis in its full spectrum. Model 456 can simultaneously recognize the low frequency signal generated when pressure is applied to glass surfaces in protected areas, as well as the characteristic sound created when glass is broken. The result of this dual analysis is virtually "false alarm free" glass break detection. Combine bi-level analysis with sensitivity adjustment and you've got Glasstrek 456, the most advanced glass break detector available on today's security market.

### APPLICATIONS:

Glasstrek delivers effective coverage in the presence of plate, tempered, and laminated glass, without the need for special sensitivity adjustments. However, since optimal performance is dependent on secure, vibration-free mounting, there must be no play between the panes under surveillance and their framework. Glasstrek can be used in most protected areas, including rooms with blinds, curtains, or multiple windows, as long as careful coverage tests are conducted using Testtrek 1. Breakage in panes of glass 16" X 24" or larger will be detected, for every standard thickness of plate (1/8"-1/4") and tempered glass (1/8"-1/4"). Breakage in panes of glass 28" X 28" or larger will be detected for every standard thickness of laminated glass (1/8"-1/4"). Glasstrek detector should not be connected to 24 hour protection zones. Installation is not recommended in protected areas that contain any of the following:

- 1) windows with closed wooden interior shutters;
- 2) windows with insulated, lined, or sound-muffling drapes;
- 3) rooms with ceilings higher than 15' (if ceiling-mounted);
- 4) rooms smaller than 10' X 10' where loud noise is common (due to use of kitchen appliances or stereo systems);
- 5) rooms where machinery noise is present (air compressors, etc.)

### FEATURES:

- Software driven, 8/12 bit microprocessor-controlled digital signal processing (8 MHz)
- High energy, low frequency sound pressure pulse detection
- Full audio spectrum 7 frequency signal and impact analysis including infra-sound pressure analysis
- 2-colour display of impact and spectrum analysis, alarm and test mode
- Digital RFI/EMI filtering, extremely high immunity
- Field test mode
- Unique acoustic microphone chamber and casing design
- High/low sensitivity settings
- Alarm latch mode
- Optional audio monitor output with alarm indication for event verification

### INSTALLATION LOCATION AND SENSITIVITY SETTINGS:

A good location must be selected for optimal Glasstrek detection performance.

Set the sensitivity setting (J2) to suit the acoustic environment where Glasstrek will be located. Remove the cover by pressing the opening pin (1) on the side of the detector. See Fig. 2 for the sensitivity jumper location.

- If the environment produces echoes, as when the walls and ceilings are concrete or metal, set the sensitivity jumper to LOW (jumper in) and only consider installation locations from 4 to 15ft from the protected glass.
- If the environment has damping materials such as drapes, carpets, furniture, set the sensitivity jumper to HIGH (jumper out) and consider installation locations from 4 to 30ft from the protected glass.

Look for installation locations on the ceiling or walls adjacent or opposite to the protected glass. Do not use the wall housing the protected glass. Avoid proximity to noisy objects such as bells, fans, compressors and loud machinery.

Determine the exact location and orientation of Glasstrek by making sure that the microphone side of the detector has a direct and unobstructed view of the protected glass and that the detector is positioned so that the protected glass lies within the optimal detection angle. If Glasstrek is on a wall opposite to the protected glass, this may affect the efficiency of detection if the glass to be protected is outside the optimal detection angle. See Fig. 1.

### INSTALLING GLASSTREK: (Refer to Fig. 2)

- 1) Remove the cover by pressing the opening pin (1) on the side of the detector.
- 2) Run the wires through one of the holes at the back or side openings of the case.
- 3) Connect the terminals.
- 4) Mount the detector in its location with a screw inserted into screw holes (2) and (3).
- 5) Replace the cover.
- 6) Test the Glasstrek.

### TESTING THE GLASSTREK 456:

Verify detector operations in "test" mode with the Testtrek 1. Use of other testers is not recommended because only Testtrek is properly calibrated for use with the Glasstrek detector.

### INITIATING TEST MODE: (Refer to Fig. 2)

Remove jumper J1. The red LED flashes. Replace jumper J1. The green LED illuminates for 4 seconds, followed by an intermittent flashing of the red LED. The detector now operates in "test" mode for about 4 minutes. It will automatically return to normal mode after this period. To cancel test mode, pull out and replace J1 again.

### CONDUCTING TESTS:

Once in "test" mode, with the red LED flashing intermittently, move to the part of the protected surface furthest from the Glasstrek detector to conduct the test. Press and hold the "push" switch on the Testtrek until a full test tone is produced. The Glasstrek's green LED should respond to this tone. If the green LED does not respond to the test tone, the detector should be relocated. Testtrek checks the high audio frequency detection. Operation of the Glasstrek's infra-sound analysis capability is tested when it is in "test" mode. While green LED is "ON", carefully strike the protected surface with a cushioned tool. This will generate an alarm. Please note that the unit must be in "test" mode to conduct coverage tests. Glasstrek will not respond effectively to test signals if it is not set in "test" mode.

For UL installations, unit must be connected to a listed control unit or power supply with a minimum 4hrs standby power.

\*\*\*\*Following installation, Glasstrek should be re-tested at least once a year.

**WARNING:** Testtrek produces high sound pressure levels, and should never be pointed directly at the human ear. Keep at least 12" from the ear.

### DISPLAY MODE:

*Normal mode: Red LED:*

- 1) Intermittent flashing takes place upon recognition of high level attack signals. (Can be visually tested by clapping or knocking close to the detector.)
- 2) 4 second illumination if a glass break is detected when memory latch is "off" (Jumper J1 "in")
- 3) Continuous illumination upon detection of a glass break when memory latch is "on" (Jumper J1 "out")
- 4) 4 minute continuous flashing indicates unit is in "test" mode.

*Normal mode: Green LED:*

Will flash intermittently when spectrum analysis is in progress. This indicates that attack analysis has been successfully confirmed, and part of the frequency spectrum is valid.

*Test mode: See "Testing the Glasstrek"*

### ALARM MEMORY:

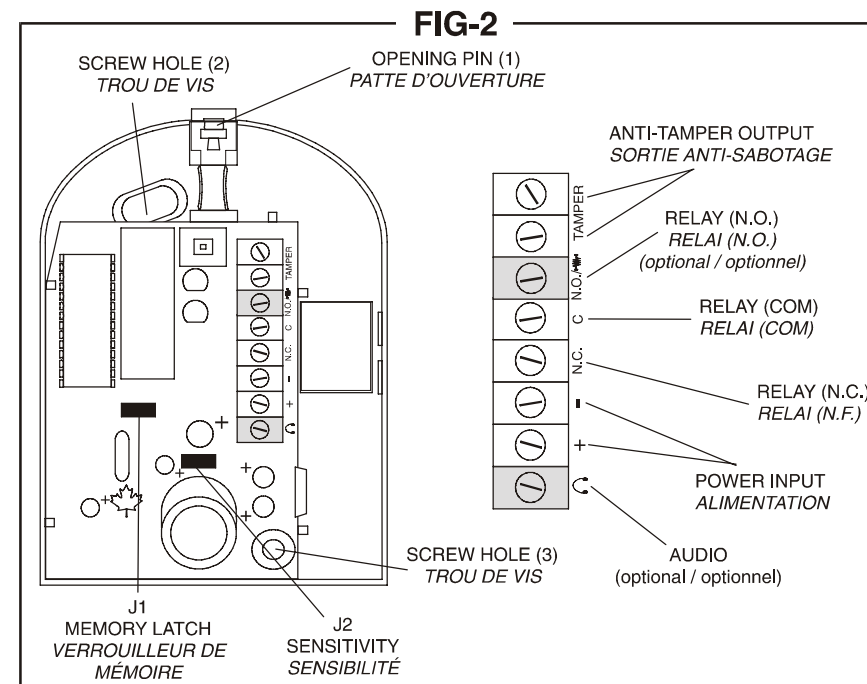
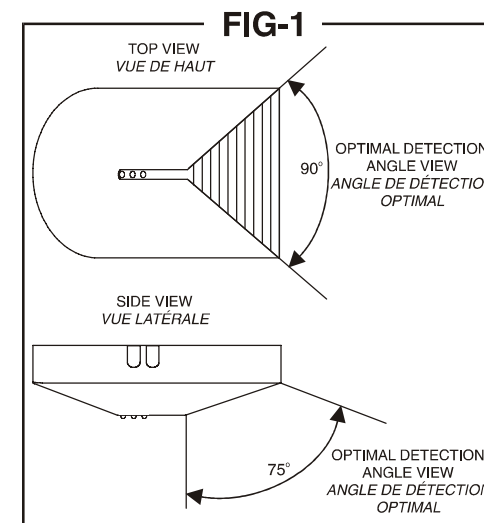
The Glasstrek is equipped with a latching circuit. When jumper J1 is removed, an alarm condition latches the red LED on. Only the LED is affected by the latching circuit. Alarm relay operation is not interrupted. The alarm relay remains open for three seconds when an alarm condition is reached. The LED can be reset in "latch" mode by replacing jumper J1 and removing it again, or by disconnecting and restoring power to the detector.

### USING AUDIO OUTPUT: (not UL tested)

This output can be connected to any amplifier "aux" input, if you wish to monitor the sound in the protected area. A tone will be generated when the Glasstrek detects glass break conditions, indicating alarm status. (Use of coax cable will permit noise reduction).

### WARRANTY

The Seller warrants its products to be free from defects in materials and workmanship under normal use for a period of one year. Except as specifically stated herein, all express or implied warranties whatsoever, statutory or otherwise, including without limitation, any implied warranty of merchantability and fitness for a particular purpose, are expressly excluded. Because Seller does not install or connect the products and because the products may be used in conjunction with products not manufactured by Seller. Seller cannot guarantee the performance of the security system. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. In no event shall the Seller be liable to the buyer or any other person for any loss or damages whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits stolen goods, or claims by any other party, caused by defective goods or otherwise arising from the improper, incorrect or otherwise faulty installation or use of the merchandise sold.



### SPECIFICATIONS

Voltage	9 - 16VDC	Tamper output	150mA, 28VDC, Form A (N.C.)
Current	17mA	Operating temp.	-20°C to 50°C (4°F to 122°F)
Coverage	High: 9m (30 ft) / Low: 4.5m (15 ft)	Processing	1. Attack rise time 2. Attack sound pressure level 3. 7 band audio spectrum analysis 4. Envelope duration 5. Infra-sound
Size	9cm (3.5") X 6.6cm (2.6") X 2.5cm (1")	Microprocessor type	12/8-bits
Weight	100g (4oz)		
Relay output	150mA, 28VDC, Form A (N.C.), Form C (optional)		

Look for and marks on products. Only products bearing those marks are UL and ULC listed. ULC-listed in compliance with Standard S306: intrusion detection unit  
UL-listed in compliance with Standard 639: intrusion detection unit (ANSR)

### UL INSTALLATIONS

1. Input voltage is 9V to 16V.
2. The detector should be installed facing the area to protect.
3. The unit should be tested once a year by the installer.