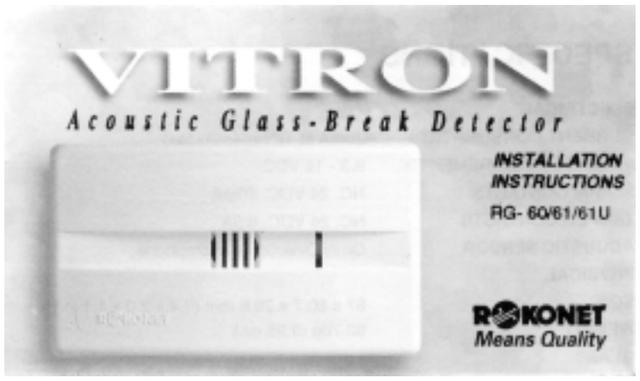


GENERAL DESCRIPTION

The **VITRON** is an advanced microprocessor based Acoustic Glass Break detector. Using advanced glass-breaking pattern analysis of both low frequency "flex" & high frequency "shatter" channels it will detect the breaking of most common types of framed glass panes while ignoring false

MAIN FEATURES

- RG-60 & RG-61 models for up to 4.5m or 9m ranges
- Suitable for most common types of plate, tempered, laminated and wired glass:
- Minimum size for all types of glass: 30cm x 30cm (12" x 12")
- Thickness: Plate 3.2 mm - 6.4mm (1/8" - 1/4")
  Tempered, Laminated, Wired 6.4 mm (1/4")

- No adjustments necessary - each unit fully calibrated at factory
- Will not alarm if glass pane broken from inside or glass dropped on floor.
- Active and passive microphone supervision - verifies unit is working
- Full remote test using RG-65 Glass Break Simulator - no need to open unit
- RA66 optional ceiling/wall mount bracket available for optimal mounting and performance.

INSTALLATION PROCEDURE

STEP 1 RANGE OF COVERAGE

VITRON range of coverage depends on (a) the type of glass (see Table 1) (b) the angle between VITRON and glass (see Fig 1)

Type of Glass / Model	Plate			Tempered, Laminated, Wired		
	Size	Thickness	Max. Range	Size	Thickness	Max. Range
RG60	Minimum 30x30cm (12"x12")	3.2 - 6.4mm (1/8"-1/4")	4.5m (15ft)	Minimum 30x30cm (12"x12")	6.4mm (1/4")	3m (10ft)
RG61	Greater than 30x30cm (12"x12")	3.2 - 6.4mm (1/8"-1/4")	9m (30ft)	Minimum 30x30cm (12"x12")	6.4mm (1/4")	6m (20ft)
	Minimum 30x30cm (12"x12")		6m (20ft)			

Table 1: VITRON range of coverage

Angle (degrees)	Percent of max range
0	100
15	96
30	87
45	70
60	50
75	26
90	0

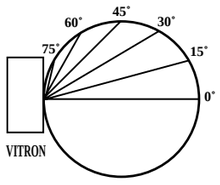


Fig 1: Percentage of Maximum Range as function of angle between Vitron and glass

Verify that the distance between the VITRON and the furthest point on the protected glass does not exceed the maximum specified range taking into account the reduced range due to angle (see Fig 2)

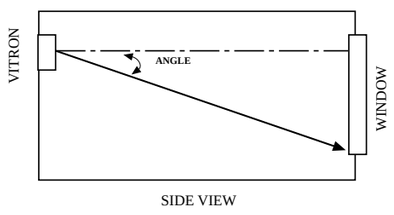
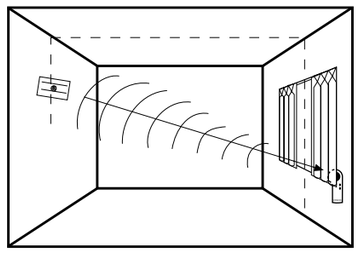


Fig 2:Angle between VITRON and glass

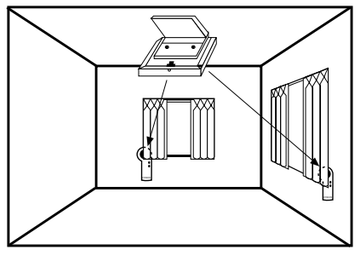
Other factors affecting range:
- There should be no obstructions between the VITRON and the protected glass:
- Curtains and blinds may reduce the effective range
- Sound absorbing materials in the protected area may reduce the range

STEP 2 MOUNTING LOCATION

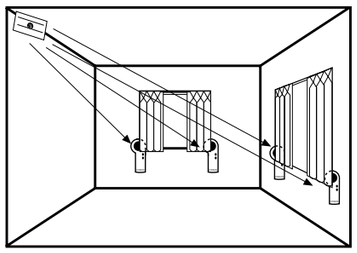
For optimal results the VITRON should be mounted as nearly opposite the glass area to be protected, as shown in Fig 3 below:



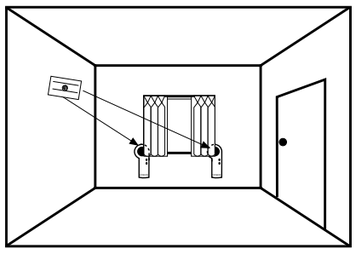
Opposite Wall - Mounted
(For optimal results VITRON is centered opposite glass)



Ceiling Mounted
(for optimal results VITRON is centered and directed towards protected glass using RA-66 Bracket).



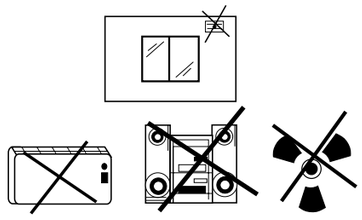
Corner Mounted
(choose corner opposite glass to be protected).



Side wall - mounted
(not recommended as VITRON is not opposite glass - see range versus angle diagram.
Test carefully at both ends of glass using RG-65 Tester)

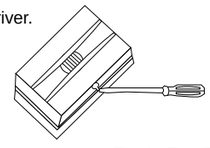
Fig 3: VITRON Mounting Options

Notes: a) Do not mount VITRON on same wall as protected glass
b) Avoid installing the VITRON near sources of loud noises or vibrations (air conditioners, fans, compressors, stereos, etc)



STEP 3 MOUNTING

Open the cover using a flat screwdriver.



Open the required mounting and cable holes (see Fig 4). The PCB does not need to be removed unless corner mounting or optional mounting bracket (RA66) are used.

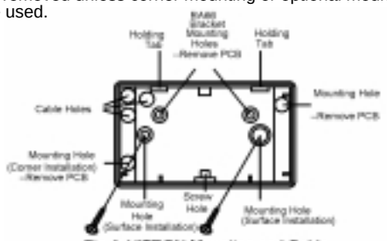


Fig 4: VITRON Mounting and Cable Holes

Insert the cable through the cable hole and mount the rear cover in its final location. Seal the remaining holes with sealant.
Snap back the PCB (if removed).

STEP 4 TERMINAL WIRING

Wire the cable to the Terminal Block as follows (see fig 5):

12 VDC : Power supply inputs
ALARM : Normally-Closed relay outputs
TAMPER : Normally-Closed Tamper switch outputs
EOL : End-of-Line resistor connection

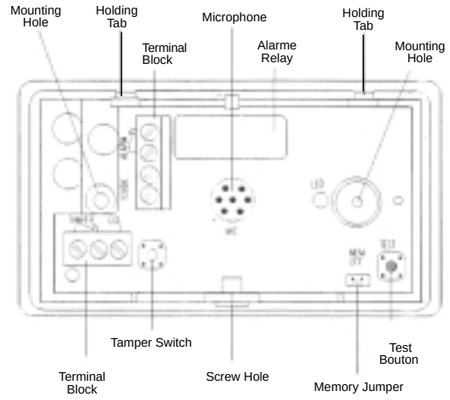


Fig 5: VITRON PCB - General View

STEP 5 TESTING

Testing should be performed using the RG65 VITRON tester which has been specially designed and calibrated to give accurate range test results.
- Set lower selector switch on RG65 to CODE setting. Press operating button on tester to put unit into test mode. VITRON LED will blink every 2 seconds.
- HIGH FREQUENCY (AUDIO) TEST:
  Position the Glass Break Simulator at the farthest point on the protected glass and face it into the room. Set lower selector to GLASS setting and upper to type of glass to be simulated. Generate glass-break sound by pressing operating button. Verify that VITRON LED comes on for 3 seconds and ALARM relay is activated.
- LOW FREQUENCY TEST:
  Tap the window gently. (Caution: breaking glass may cause injury). Verify that the VITRON produces several rapid flashes of its LED in conjunction with each tap. The ALARM relay is not activated in this case.

Note: all tests should be conducted under worst-case conditions. All sounds should be generated behind curtains or blinds.

ENVIRONMENTAL TEST
Operate all devices in the protected region that may interfere with the detector, including air conditioners, fans, radios etc.

Observe the VITRON and note any disturbances:

LED Indication	Disturbance	Possible Cause
Blinks once every 2 sec.	NONE	* * *
Rapid Flashes	YES	Low frequency sound
Continuously ON for 3 sec.	YES	High frequency sound

If disturbances occur, re - position the unit and re-test.
Turn all noise generating equipment off and wait until unit returns to NORMAL mode.

NOTE: The VITRON will return to NORMAL mode after two minutes. Setting the "CODE" switch and pressing the "Manual" button at any time will initiate another two minutes of Full Remote Test Mode.

If RG65 tester is not available test mode can be initiated by opening front cover and pressing the test button. The VITRON LED will blink every 2 seconds. Replace front cover. VITRON will automatically return to normal operation after 5 minutes. Pressing the button again during the test mode will immediately return unit to normal mode. Functional test can now be performed using another tester.

NOTE: Any test performed using testers other than RG65 will not give accurate range results.

STEP 6 MEMORY INDICATION

To use the MEMORY option - remove the MEM OFF Jumper. The LED is latched on the first alarm.

The LED is reset by temporarily removing the power from the detector (using a **Switched** 12V line from the control panel).

STEP 7 NORMAL OPERATION

There are three types of indication in normal mode:

Active Supervision: Any loud sounds such as clapping, whistling or key-jingling should produce a flash of the VITRON's LED. This verifies that the VITRON is active. The alarm relay is not opened.

Passive Supervision: The Vitron continuously monitors its audio channel. If no sounds are registered for more than 24 hours the LED will flash rapidly. This indication will persist until a sound is registered. The alarm relay is not opened.

Alarm: On detection of framed glass being broken from outside the LED will light continuously for 3 seconds and the alarm relay will open.

SPECIFICATIONS

ELECTRICAL	
CURRENT CONSUMPTION	20mA at 12V (24mA max)
VOLTAGE REQUIREMENTS	9.3 - 16 VDC
ALARM CONTACTS	NC, 24 VDC, 50mA
TAMPER CONTACTS	NC, 24 VDC, 0.5A
ACOUSTIC SENSOR	Omni Directional Microphone
PHYSICAL	
SIZE	87 x 50.7 x 28.6 mm (3.4 x 2.0 x 1.1 in.)
WEIGHT	63.70g (2.25 oz.)
GLASS	
TYPES	Plate, laminated, wired & tempered.
SIZES	30 x 30cm (12" x 12") minimum, except for 9m / 30ft RG-61 with 50 x 50cm (20" x 20")
ENVIRONMENTAL	
OPERATING TEMPERATURE	0˚C to 55˚C (32˚F to 131˚F)
STORAGE TEMPERATURE	-20˚C to 60˚C (-4˚F to 140˚F)

RG-61U
Intended to be connected to a UL control panel capable of providing 4 hours of standby power. Test annually.

Specifications are subject to change without prior notice. Should any questions arise please contact your nearest distributor.

ROKONET LIMITED WARRANTY

Rokonet Electronics, Ltd. and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 18 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by Seller, Seller cannot guarantee the performance of the security system which uses this product. Seller's obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, within a reasonable time after the date of delivery, any product not meeting the specifications. Seller makes no other warranty, expressed or implied, and makes no warranty of merchantability or of fitness for any particular purpose.
In no case shall seller be liable for any consequential of incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever.
Seller's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay.
Seller does not represent that its products may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery of fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result.
Consequently seller shall have no liability for any personal injury, property damage or other loss based on a claim that the product fails to give warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause of origin, seller's maximum liability shall not in any case exceed the purchase price of the product, which shall be the complete and exclusive remedy against seller.
No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week.

FOR MORE INFORMATION SEE TIN-2

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