VITRON Plus

Acoustic Glass-Break Detector
for Flush or surface wall/
ceiling mounting

INSTALLATION INSTRUCTIONS
RG- 70/71/FM, RG-70/71

Wall /ceiling mount Flush mount

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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.

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

GENERAL DISCRIPTION

The VITRON Plus is an advanced microprocessor based Acoustic Glass Break Detector, for flush or surface wall/ceiling mounting, using advanced glass-breaking pattern analysis of both low frequency "flex" and high frequency "shatter" channels. It will detect the breaking of most common types of framed glass panes while ignoring false alarms.

MAIN FEATURES

- RG-70FM & RG-71FM for flush mounting (single gang box) for up to 15' (4.5m) or 30' (9m) ranges
- RG70 & RG71 for wall/ceiling mounting for up to 4.5m (15') or 9m (30') ranges
- Suitable for most common types of plate, tempered, laminated and wired glass.
- Minimum size for all types of glass: 30cm x 30cm (12''x12'')
- Thickness Plate 3.2 mm-6.4mm (1/8'' -1/4'')
  Tempered, Laminated, Wired 6.4 mm (1/4'')
- No adjustments necessary - each unit is 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 in working condition.
- 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 Plus range of coverage depends on the type of glass (see Table 1) and the angle between VITRON Plus and glass (see Table 2 Fig 1).

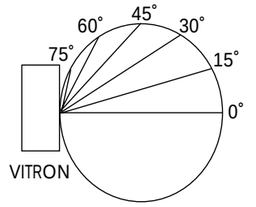
Table 1: Vitron Plus range according to glass type

Typ of Glass / Model	Plate			Tempered, Laminated, Wired		
	Size	Thickness	Max. Range	Size	Thickness	Max. Range
RG70 RG70FM	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)
RG71 RG71FM	Minimum 50x50 cm (20"x20")	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 2: VITRON Plus range of coverage according to angle

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

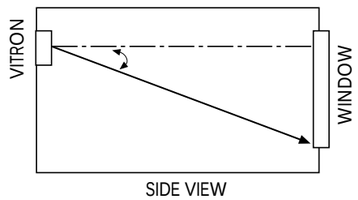
Fig 1



Percentage of Maximum Range as function of angle between Vitron and glass

Verify that the distance between the VITRON Plus 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

Important:

Other factors effecting range:

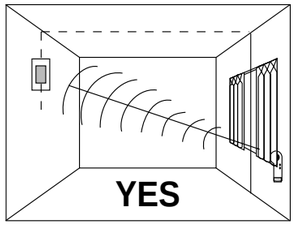
- There should be no obstructions between the VITRON Plus and the protected glass;
- Curtains and blinds may reduce the effective range;
- Sound absorbing materials in the protected area may reduce the range;

STEP 2 RANGE OF LOCATION

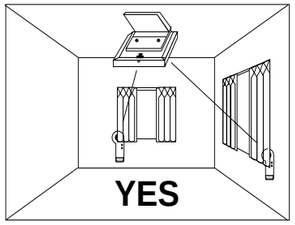
VITRON Plus can be mounted in a single gang box using flush mount adapter or on wall or ceiling. For optimal results the VITRON should be mounted as nearly opposite the glass area to be protected, as shown in Fig 3 below:

Fig 3

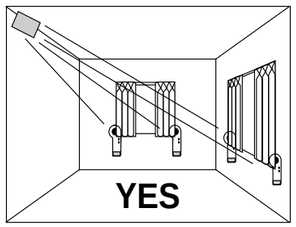
VITRON Mounting Options



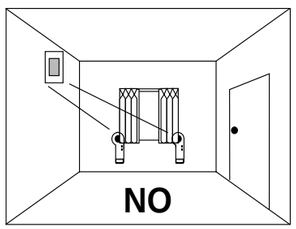
Opposite Wall - Mounted
(For optimal results VITRON is centered opposite glass)



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



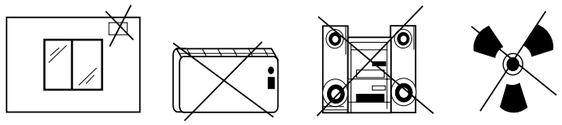
Corner Mounted
(choose corner opposite glass to be protected).



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)

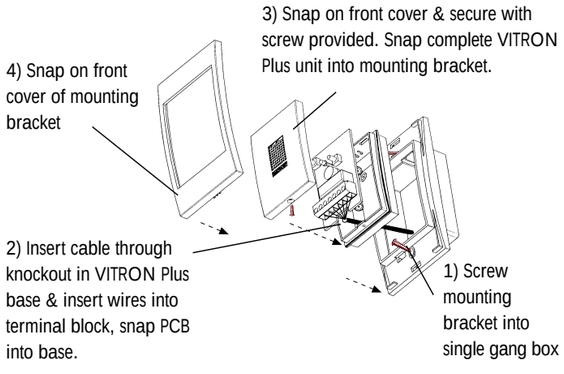
NOTE

a) When Ceiling Mounted use the RA66 bracket for best preformance
b) Do not mount VITRON Plus on same wall as protected glass
c) Avoid installing the VITRON Plus near sources of loud noises or vibrations (air conditioners, fans, compressors, stereos, etc.)



STEP 3 MOUNTING

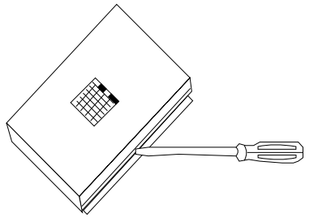
FLUSH MOUNTING



NOTE

To remove trimplate, squeeze the top and bottom simulaniously and pull away

WALL / CEILING MOUNTING



- Open the cover using a flat screwdriver.
- Remove the Pcb in order to facilitate ease of wiring (see Fig 4)
- Open the required mounting and cable holes (see Fig 5)
- 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).

Fig 4

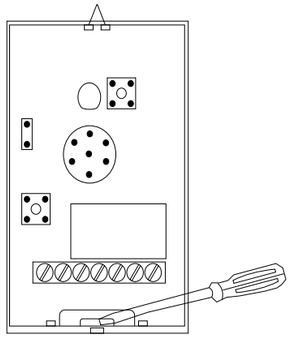
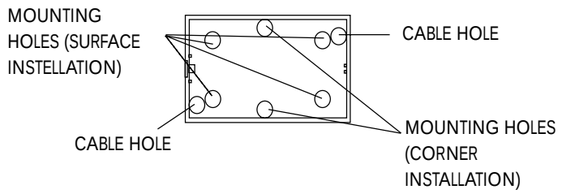


Fig 5

VITRON Mounting and Cable Holes

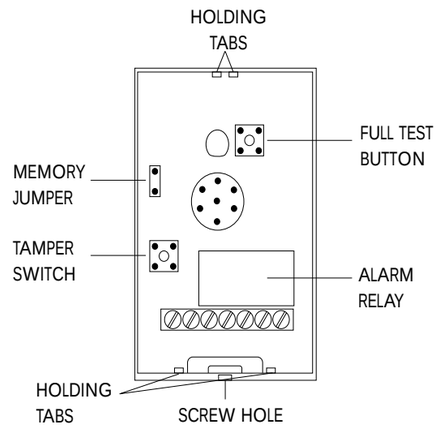


STEP 4 TERMINAL WIRING

Wire the cable to the Terminal Block as follows (see fig 6):
12 VDC : Power supply inputs
ALARM : Normally-Closed relay outputs
TAMPER : Normally-Closed Tamper switch outputs
EOL : End-of-Line resistor connection

Fig 6

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 turns 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, if present.

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 inserting screwdriver in slot on front cover (to the right of the LED) and pressing the test button. The VITRON LED will blink every 2 seconds. VITRON will automatically return to normal mode after 5 minutes. Functional test can now be performed using another tester. Pressing the button again during the test mode will immediately return unit to normal mode.

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 a minimum of 50x50cm(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-71FMUL
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.