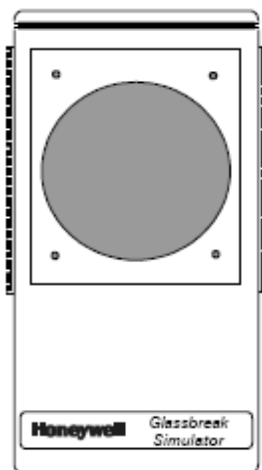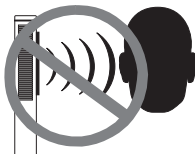## OPERATING INSTRUCTIONS

WARNING: The FG-701 Simulator produces extremely loud sounds and can be hazardous to hearing when used at close range.

Never operate the FG-701 when it is pointed toward someone's head.

This glassbreak simulator is for testing the range and function of all FlexGuard® glassbreak detectors.
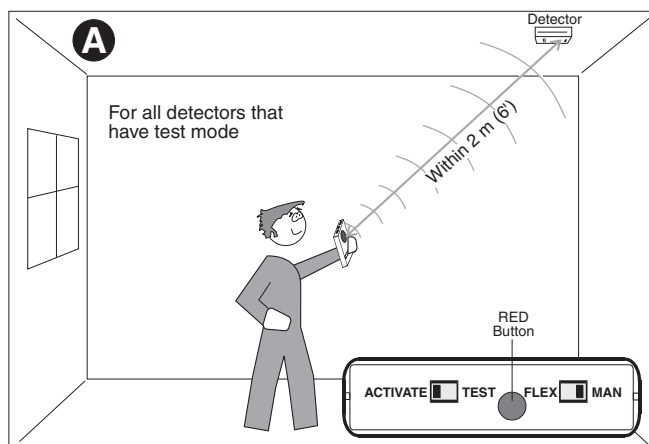
Most glassbreak models have the "Activate" test mode feature described below, including models:

FG10xx, FG15xx, FG16xx, FGW-15xx, 5853, FG8M, 5852H and others.

OPERATING THE SIMULATOR

In the following, "*flex*" refers to the low frequency sound caused by gently thumping the window and "*audio*" refers to the high frequency sound from the glassbreak simulator.
If the detector range is adjustable, check that it is set correctly per the detector's installation instructions.

FlexGuard® glassbreak detectors with test mode must be in test mode for accurate testing with the FG-701. For those detectors, use *Activate* to start test mode. Refer to the detector's installation instructions for test mode details.
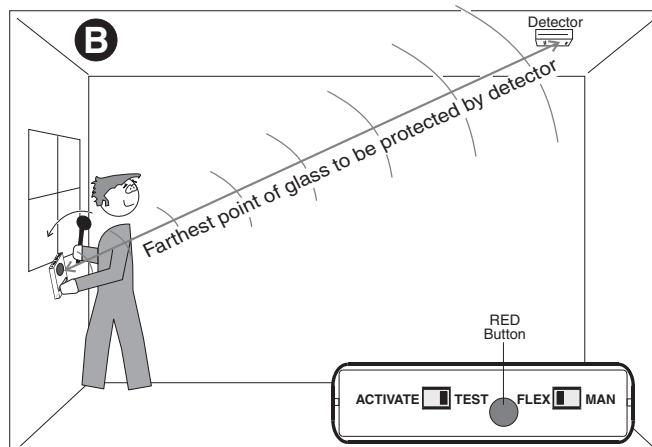
To *Activate* glassbreak detector test mode:

1. Install the glassbreak detector as per the detector's installation instructions.
2. Stand within 6' (2m) of the detector.
3. Set the FG-701 to ACTIVATE and MAN (manual). See **A**.
4. Aim the FG-701 speaker at the detector.
5. Press the RED button for the ACTIVATE sound.

The green LED will flash once per second to indicate the detector is in test mode.

If test mode does not start, try again from a different position.

Note: Pressing the RED button again will deactivate the detector test mode. Test mode also turns off automatically after 5 to 10 minutes. (Refer to the detector's installation instructions.)

Testing detector alarm function (FLEX mode):

Important: If window coverings are present, close them fully and hold the FG-701 **behind** the window coverings for testing.

1. Set the FG-701 to TEST and FLEX. See **B**.
2. Position the FG-701 near the farthest point of the protected glass, and point the speaker directly at the glassbreak detector.
3. Press the RED button. The simulator will "click" and start an 8-second armed period.
4. Generate a *flex* signal by carefully thumping the glass with a cushioned tool. The FG-701 will respond by producing a burst of glass-break *audio*.

If both the *flex* and *audio* are received properly, the red alarm LED on the detector will light, and the detector will send an alarm.
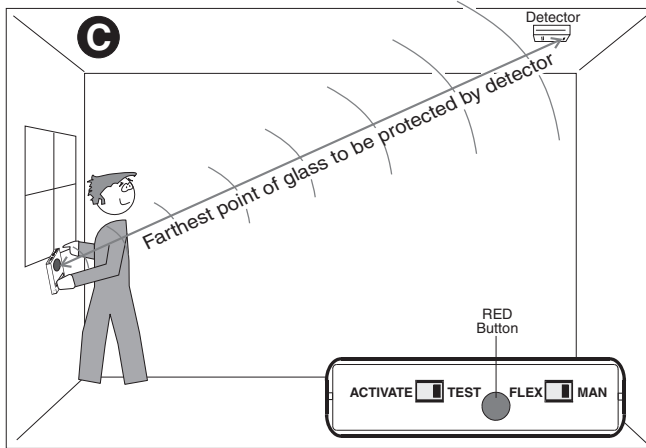
After the simulator is triggered by a *flex* signal, there is a one-second hold-off period during which the FG-701 will not trigger again. This prevents repeated triggering due to continued vibration of the glass.

Successfully triggering the simulator with a *flex* signal generates a new 8-second armed period. If you do not generate a *flex* signal within 8 seconds, the simulator will automatically "click" off. Press the red button to re-arm the simulator.

The FG-701 may also be turned off by selecting MAN (manual) mode.

Testing detector range [MAN (manual) mode]:

If the glassbreak detector fails to signal an alarm when testing in the FLEX mode, switch the FG-701 to the MAN (manual) mode. *Audio* range can be tested independently in this mode. This will enable you to determine if the problem is *flex* or *audio* detection.

Testing detector range [MAN (manual) mode] (continued):

1. Set the FG-701 to TEST and MAN (manual). See **C**.
2. Position the FG-701 near the protected glass and point the speaker directly at the glassbreak detector. Watch the green LED on the detector.
3. Press the RED button and the FG-701 will generate a burst of glassbreak *audio*.

Refer to the detector's installation instructions for details of green LED function.

BATTERY ANNOUNCEMENT

When the battery is low, the simulator *audio* sound will be interrupted by the word "BATTERY." The battery must then be replaced.

Use only 9V alkaline batteries. Do not use carbon-zinc or rechargeable Ni-Cd batteries because they don't have sufficient peak power capacity.

TECHNICAL NOTES

When a window is broken, many things affect the sound produced, including type of glass, glass size and thickness, type of mounting, the breaking object, and how much force is used. The sound will also be modified by absorptive or reflective surfaces in the room.

No simulator can account for all possible conditions, but the sound produced by the FG-701 is carefully designed to represent a worst-case break. The sound is a recording of a small pane of tempered glass broken in a controlled environment. The output level of the simulator is correlated with the original sound to insure an equivalent response in FlexGuard® detectors. In production, the acoustic output is factory-calibrated.

Room characteristics greatly affect the range indicated by the simulator. A room with hard surfaces will increase range, because hard surfaces reflect the sound back into the room. A room with absorbing surfaces (carpets, acoustic tiles) and absorbing materials (curtains and soft furniture) will reduce range.

Real glassbreak sound is affected in the same way as the simulator sound because it has the same frequency content and originates from the same location in the room. So the audio range indicated by the FG-701 is a good indication of glassbreak detection range.

A low frequency sound is also produced when a window is broken. In FLEX mode, the low-frequency signal (*flex*) is generated by gently thumping the window. The *flex* signal is detected by the FG-701 which sends a burst of *audio*. If sufficient *flex* can be generated by a safe, non-breaking thump to the glass, there is good assurance that a real break will be detected. Range indicated by the simulator should be considered the safe detection range for an individual detector. Because of component tolerances do not assume that a substitute detector will work at the same range. If a detector is changed, the replacement should also be tested with the FG-701.

PRODUCT SPECIFICATIONS

Temperature Range:
Operating: 32ºF to 122ºF (0ºC to +50ºC)
Storage: -4ºF to +140ºF (-20ºC to +60ºC)

Output Spectral Range:
1.5 - 16 kHz

Estimated Battery Life:
2500 operations [MAN (manual) mode]

Battery Type:
9V Alkaline, Duracell MN1604 or equivalent

Output Level:
Approx. 110dB peak at 1 meter, on axis (Re 20µPa)

Dimensions:
3.25"W x 6.3"H x 0.9"D (83mm x 160mm x 23mm)

Weight:
8 oz. (.23 kg)

Approvals/listings:
CE
C-Tick

To obtain applicable EU compliance Declaration of Conformities for this product, please refer to our Website,
http://www.security.honeywell.com/hsce/international/index.html.
For any additional information regarding the compliance of this product to any EU specific requirements, please contact:
    Quality Assurance Department,
    Honeywell Security & Custom Electronics,
    Newhouse Industrial Estate
    Motherwell,
    Lanarkshire ML1 5SB,
    Scotland,
    United Kingdom.
    Tel: +44(0)1698 738200
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