

OPERATING INSTRUCTIONS

**FG-701**  
Glass-Break Simulator

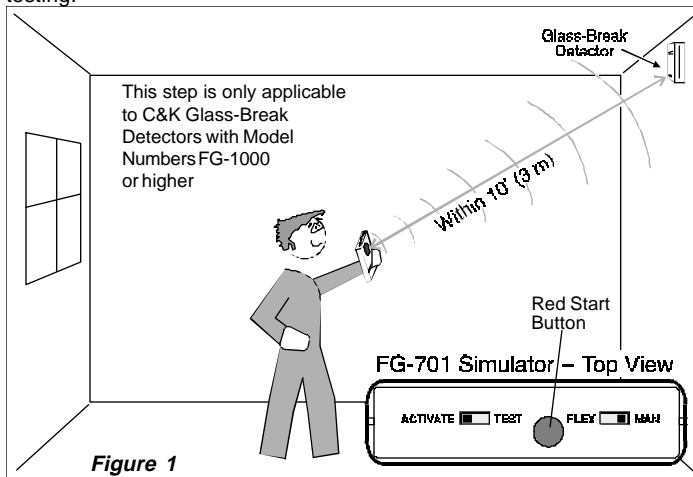
**WARNING:** The FG-701 Simulator produces extremely loud sounds and can be hazardous to hearing when used at close range. Never operate the FG-701 with it pointed toward someone's head.

**FEATURES**

- Digital audio produced glass-break sound
- MANual and FLEX test modes
- Sound activation of test mode for FG-1000 series detectors
- Low battery voice announcement
- Automatic turn-off to conserve battery life
- Compatible with all C&K glass-break detectors

**OPERATING THE SIMULATOR**

Model FG-1000 or higher glass-break detectors must be activated for testing.

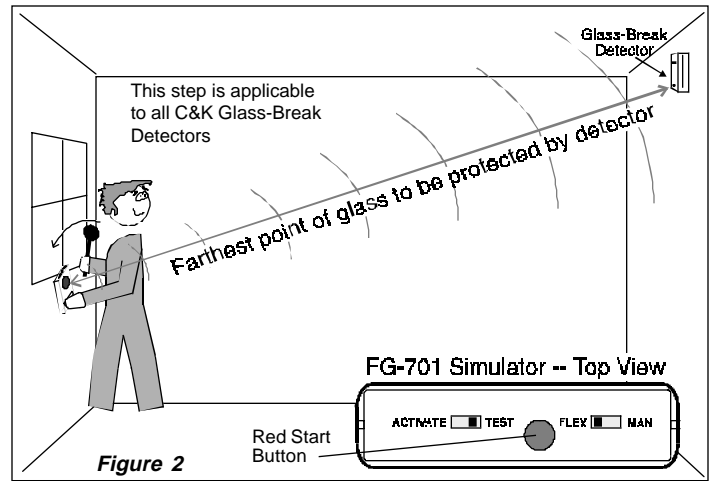


**To Activate the Model FG-1000 (or higher) Glass-Break Detector:**

1. Install the glass-break detector in an appropriate location (refer to the detector's installation instructions).
2. Stand within 10' (3 m) of the detector.
3. Set the FG-701 switches to the ACTIVATE and MANual modes (see Figure 1).
4. Aim the front of the FG-701 Glass-Break Simulator at the detector.
5. Press the red start button for the ACTIVATE sound.

The green LED on FG-1000 series detectors will flash rapidly to indicate the detector is in test mode.

**Note:** Pressing the red button again will deactivate the detector test mode. The FG-1000 series test mode also turns off automatically after ten minutes.



**Testing in FLEX mode:**

1. Set the FG-701 switches to the TEST and FLEX modes. (See Figure 2.)
2. Press the red start button. The simulator will "click" on and start an eight- second armed period.
3. Position the FG-701 near the farthest point of the protected glass, and point it directly at the glass-break detector.
4. Generate a flex signal by carefully striking 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.

After the simulator is triggered by a flex signal, there is a one-second hold-off period during which the FG-701 will not retrigger. This prevents repeated triggering due to continued vibration of the glass.

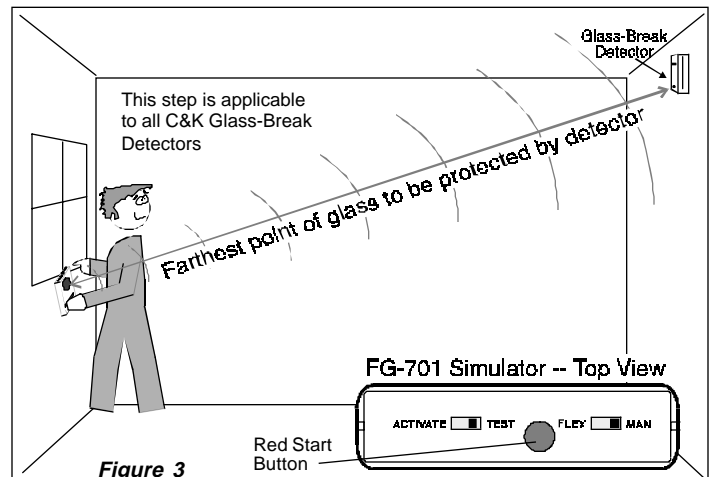
Successfully triggering the simulator with a flex signal generates a new eight- second armed period. If you do not generate a flex signal within eight seconds, the simulator will automatically "click" off. Press the start button to re-arm the simulator.

The FG-701 may be turned off by either waiting for it to "click" off in FLEX mode, or by selecting MANual mode.

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

**Testing in MANual mode:**

If the glass-break detector fails to signal an alarm when testing in the FLEX mode, switch the FG-701 to the MANual mode. This will enable you to determine if the problem is flex or audio detection.



### Testing in the MANual Mode (Continued):

1. Set the FG-701 switches to the TEST and MANual modes. (See Figure 3.)
2. Position the FG-701 near the protected glass and point it directly at the glass-break detector. Watch the green LED on the detector.
3. Press the red start button and the FG-701 will generate a burst of glass-break audio.

If the LED on the detector flashes, the range is acceptable for audio. If the LED does not flash, move the detector closer to the glass and try again. (On FG-1000 series detectors, the green LED will momentarily turn off.)

### TECHNICAL NOTES

When a pane of glass is broken by an impact, many variables affect the sound it produces. Depending on the type of glass, its size and thickness, type of mounting, the breaking instrument, and the force with which it is struck, the sound it produces varies. In addition, the sounds will be modified by absorptive or reflective surfaces in the room where the glass-break detector is located.

While no simulator can account for all possible conditions, the sound produced by the FG-701 is carefully designed to represent the more difficult cases. The sound is an enhanced digital 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 C&K detectors. In production, the acoustic output is factory-calibrated to insure uniform performance.

Room characteristics greatly affect the apparent detection range indicated by the simulator. In a room with hard walls, floor, and ceiling, the audio range will be much greater than in a room with absorbing surfaces such as carpets and acoustic tiles. This is because hard surfaces reflect the sound back into the room, reinforcing it at points far from the simulator. Actual glass-break sound is affected in the same way as the simulator sound, since it has the same frequency content and originates from the same location in the room. Thus the audio range achieved with the FG-701 is a good indication of glass-break detection range, independent of the room characteristics.

In FLEX mode, the low-frequency signal is generated by striking the protected glass. If sufficient flex can be generated by a safe, non-breaking blow to the glass, there is good assurance that an actual break will be detected.

Range indicated by the simulator should be considered the safe detection range for an individual detector. Because of component tolerances, it should not be assumed 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.

### BATTERY ANNOUNCEMENT

When the battery is low, the simulator sound will be interrupted by the word "BATTERY." The battery should 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.

### PRODUCT SPECIFICATIONS

#### Temperature Range

*Operating:* 32 to 122 °F  
(0 to +50 °C)  
*Storage:* -4 to +140 °F  
(-20 to +60 °C)

#### Output Spectral Range:

1.5 - 16 kHz

#### Output Level:

Peak SPL of 102 dB at 1 meter, on axis

#### Battery Type:

9V Alkaline, Duracell MN1604 or equivalent

#### Dimensions:

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

#### Estimated Battery Life:

2500 operations (MANual mode)

#### Weight:

8 oz. (.23 kg)

#### LIMITED WARRANTY

Seller warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 18 months from the date stamp control on the product or for products not having a C&K Systems date stamp, for 12 months from the date of original purchase, unless the installation instructions or catalogue sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any part which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. This warranty is void if the product is altered or improperly repaired or serviced by anyone other than C&K Systems factory service. For warranty service, contact the nearest C&K service center.

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