

INSTALLATION AND OPERATING INSTRUCTIONS FOR THE BGE-9500 DUAL SWITCH™ GLASS BREAK DETECTOR



II. INSTALLATION

1. **LOCATION:** The BGE-9500 is best located on the ceiling just above the glass barrier to be protected. However, it may also be mounted on the same wall or on an adjacent wall. Keep an open field between the unit and points of entry, no partitions, etc. between them. The unit must be located within 20 feet of the glass being protected. The 20 feet must be wall surface not direct line of sight. (Refer to Illustration B). There is also a bracket shipped with the detector to allow mounting of the unit in a corner or on a suspended ceiling (Refer to Illustration C).

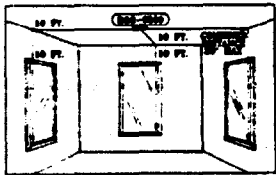


ILLUSTRATION "B"

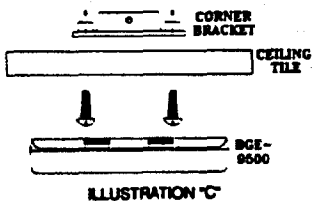


ILLUSTRATION "C"

2. **CALIBRATION:** Proper calibration of the BGE-9500 requires a BGE-D9 test tool. To calibrate the BGE-9500, the shock sensitivity control must be adjusted. The control should be turned slowly clockwise until the yellow "VIBRATION" indicator glows briefly when the BGE-D9 is operated on the center of the glass most distant from the sensor. Between each adjustment allow five seconds for stabilization.

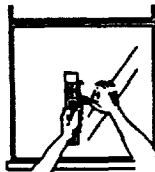


ILLUSTRATION "D"

NOTE: BGE-D9 should set flat against the glass surface when releasing the snap hook TO PREVENT GLASS BREAKAGE

The BGE-D9 is also used to insure that the audio portion of the BGE-9500 is working properly. During the calibration of the shock sensitivity, the BGE-D9 should also cause the "audio" LED to glow briefly.

- I. Hold the handle with left hand and pull the snap hook back all the way with the right hand.
- II. Place the BGE-D9 on the middle of the glass at the most distant point of protection. Release. (Refer to Illustration "D")
- III. The audio H/Ls jumper may be placed in the Lo position when the unit is within 5 feet of the most distant piece of glass to be protected.

I. INTRODUCTION

The BGE-9500 Dual Switch is a detector of intrusions initiated by the breaking of glass barriers such as may be found in windows and many commercial doors. This device incorporates a unique decision making system which requires both audio emissions and shock vibrations of breaking glass to validate an alarm.

The BGE-9500 Dual Switch has a red alarm indicator in addition to two yellow indicators for shock and audio. The yellow LEDs can be turned OFF via a jumper. The shock sensitivity settings can be adjusted by the control pot, while the alarm indicator on the unit may be programmed for LED latch or auto reset, both features being selectable by switches located on the unit. (Refer to Illustration A). The system is protected against tampering by way of a microswitch located inside the unit, which results in an alarm when the cover is removed.

The BGE-9500 also incorporates the Ademco transponder IC for interfacing with their proprietary two wire multiplexed zones. There is an 8 position DIP switch used to set up each unit's address. Refer to the installation instructions for proper address setting.

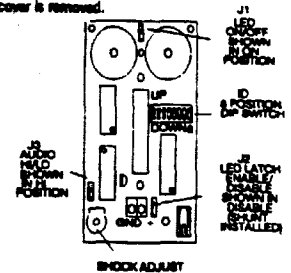


ILLUSTRATION "A"

Activate any devices such as air conditioners, fans, blowers, etc. that may generate background vibrations and sound, and operate them while the system is armed. For proper operation, machinery that may generate background vibrations and sound should not cause the unit to go into alarm. If this condition results, relocate the unit to a new position where the vibrations from these sources are minimized, while staying within range of the barrier to be protected. Attempts may be made to muffle vibration and sound sources that are troublesome or to insure that they are not allowed to operate during armed-alarm periods in lieu of relocation. If the unit has been moved it must be re-calibrated with the BGE-D9 and again checked for troublesome background vibrations and sound. If a position cannot be found to satisfy these conditions, and the sources of troublesome vibrations and sound cannot be minimized or eliminated, the BGE-9500 is not suited for that application.

3. **SELECTION ID NUMBER:** Make all identification number selections by arranging the switches on the circuit board. The ID number is equal to the sum of the switch values in the "ON" position. Each switch has a different value and should be set according to table 1.

III. OPERATION

1. INDICATORS:

RED-(ALARM) This LED indicates that a valid alarm condition has been detected and is equipped with an optional latch feature to aid in installation and trouble shooting.

YELLOW-(AUDIO) This indicates that alarm level audio is present when III.

YELLOW-(SHOCK) This indicates that alarm level vibration is present when III.

TABLE #1

SWITCH NUMBER	1	2	3	4	5	6	7	8	10 No.
switch value:	128	64	32	16	8	4	2	1	
UP	UP	UP	UP	UP	UP	UP	UP	DN	1
UP	UP	UP	UP	UP	UP	UP	UP	UP	2
UP	UP	UP	UP	UP	UP	UP	DN	DN	3
UP	UP	UP	UP	UP	UP	DN	UP	UP	4
UP	UP	UP	UP	UP	UP	DN	UP	DN	5
UP	UP	UP	UP	UP	UP	DN	DN	DN	6
UP	UP	UP	UP	UP	UP	DN	DN	DN	7
UP	UP	UP	UP	UP	UP	DN	UP	UP	8
UP	UP	UP	UP	UP	UP	DN	UP	DN	9
UP	UP	UP	UP	UP	UP	DN	UP	DN	10
UP	UP	UP	UP	UP	UP	DN	UP	DN	11
UP	UP	UP	UP	UP	UP	DN	UP	DN	12
UP	UP	UP	UP	UP	UP	DN	UP	DN	13
UP	UP	UP	UP	UP	UP	DN	UP	DN	14
UP	UP	UP	UP	UP	UP	DN	UP	DN	15
UP	UP	UP	UP	UP	UP	DN	UP	DN	16
UP	UP	UP	UP	UP	UP	DN	UP	DN	17
UP	UP	UP	UP	UP	UP	DN	UP	DN	18
UP	UP	UP	UP	UP	UP	DN	UP	DN	19
UP	UP	UP	UP	UP	UP	DN	UP	DN	20
UP	UP	UP	UP	UP	UP	DN	UP	DN	21
UP	UP	UP	UP	UP	UP	DN	UP	DN	22
UP	UP	UP	UP	UP	UP	DN	UP	DN	23
UP	UP	UP	UP	UP	UP	DN	UP	DN	24
UP	UP	UP	UP	UP	UP	DN	UP	DN	25
UP	UP	UP	UP	UP	UP	DN	UP	DN	26
UP	UP	UP	UP	UP	UP	DN	UP	DN	27
UP	UP	UP	UP	UP	UP	DN	UP	DN	28
UP	UP	UP	UP	UP	UP	DN	UP	DN	29
UP	UP	UP	UP	UP	UP	DN	UP	DN	30
UP	UP	UP	UP	UP	UP	DN	UP	DN	31
UP	UP	UP	UP	UP	UP	DN	UP	DN	32
UP	UP	UP	UP	UP	UP	DN	UP	DN	33
UP	UP	UP	UP	UP	UP	DN	UP	DN	34
UP	UP	UP	UP	UP	UP	DN	UP	DN	35
UP	UP	UP	UP	UP	UP	DN	UP	DN	36
UP	UP	UP	UP	UP	UP	DN	UP	DN	37
UP	UP	UP	UP	UP	UP	DN	UP	DN	38
UP	UP	UP	UP	UP	UP	DN	UP	DN	39
UP	UP	UP	UP	UP	UP	DN	UP	DN	40
UP	UP	UP	UP	UP	UP	DN	UP	DN	41
UP	UP	UP	UP	UP	UP	DN	UP	DN	42
UP	UP	UP	UP	UP	UP	DN	UP	DN	43
UP	UP	UP	UP	UP	UP	DN	UP	DN	44
UP	UP	UP	UP	UP	UP	DN	UP	DN	45
UP	UP	UP	UP	UP	UP	DN	UP	DN	46
UP	UP	UP	UP	UP	UP	DN	UP	DN	47
UP	UP	UP	UP	UP	UP	DN	UP	DN	48
UP	UP	UP	UP	UP	UP	DN	UP	DN	49
UP	UP	UP	UP	UP	UP	DN	UP	DN	50
UP	UP	UP	UP	UP	UP	DN	UP	DN	51
UP	UP	UP	UP	UP	UP	DN	UP	DN	52
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UP	UP	UP	UP	UP	UP	DN	UP	DN	54
UP	UP	UP	UP	UP	UP	DN	UP	DN	55
UP	UP	UP	UP	UP	UP	DN	UP	DN	56
UP	UP	UP	UP	UP	UP	DN	UP	DN	57
UP	UP	UP	UP	UP	UP	DN	UP	DN	58
UP	UP	UP	UP	UP	UP	DN	UP	DN	59
UP	UP	UP	UP	UP	UP	DN	UP	DN	60
UP	UP	UP	UP	UP	UP	DN	UP	DN	61
UP	UP	UP	UP	UP	UP	DN	UP	DN	62
UP	UP	UP	UP	UP	UP	DN	UP	DN	63
UP	UP	UP	UP	UP	UP	DN	UP	DN	64

NOTE: The BGE-9500's current drain is equivalent to three Ademco's remote point modules. Refer to the Host panel installation instructions for allowable address settings.

2. SELF-TEST:

The BGE-9500 offers a self-test feature that can be accessed through proper programming of the Ademco control panel (When Available).

3. SPECIFICATIONS:

Power Requirements	Power supplied from Ademco control panel via a two wire connection.
Standby current	1.5 mA max.
Alarm current	3.0 mA max.
LED latch	3.0 mA max.*
Wires	22 AWG min.
Range	30 linear feet, any 90° turn (Adjacent wall, same wall, ceiling)
Test	Audio and shock self-test
Operating temperature range	0°C to 70°C
User options	Shock potentiometer & audio M.I.O.
Case dimensions	2.5" x 4.5" x 0.75" thickness

* NOTE: Available through tapped ceiling for testing purposes only.

Collage-Structural (Fixed)	Yes
Acoustical	Yes
Drop Tile	Yes
Maximum Range	20'

MOUNTING SURFACE

SURFACE	RECOMMENDED
Drywall/Ministrack	Yes
Metal	Yes
Brick	Yes
Concrete block	Yes
Poured concrete	Yes
Wood	Yes

BGE-9500

Application Environment or Disturbance	Audio	Shock	Alarm	Comments
Temperature	NO	NO	NO	
Humidity	NO	NO	NO	
Thunder Storm	NO	MAY	NO	May cause alarm if audio is alarm.
Microwave	NO	NO	NO	
Infrared	NO	NO	NO	
Ultrasonic	Yes	NO	NO	Ultrasonic Source should be placed at a distance from the BGE-9500.
HVAC	MAY	MAY	MAY	Run all HVAC blowers, etc. during setup to insure against false alarms.
Phone/Door Bells	MAY	NO	NO	Try during setup.
School/Alarm Bells	MAY	MAY	MAY	May cause alarm if very close to BGE-9500.
Metal door with crash bar	MAY	MAY	MAY	Do not mount close to door.
Generators/Large Motors	NO	MAY	NO	Run during setup.
Shop Equipment	MAY	MAY	MAY	Do not run equipment when protection is on, or test during setup.
Structural Vibration	NO	MAY	NO	If vibration cannot be adjusted out consider other alternatives such as relocation or other sensors.
2 or more sensors in the same room	NO	NO	NO	
Furniture drapes, etc.	NO	NO	NO	May reduce range
Background noise	MAY	NO	NO	
Keys, Dogtags, etc.	MAY	NO	NO	
Outside Construction	MAY	MAY	MAY	If construction is on same wall or frame as protected glass the protection should be by-passed during construction.
Occupied Area Protection On	MAY	MAY	MAY	CAUTION: Hammering on structure or inside construction may cause false alarms.
Window Breakage	YES	YES	YES	

TO THE INSTALLER

Regular maintenance by the installer and frequent testing by the user is vital to continuous satisfactory operation of any alarm system.

NOTE: The BGE-9500 should be periodically tested at least once a month depending on conditions and at least once a year by the installer.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing to insure the system's proper operation at all times.

NOTE: The BGE-9500 should be connected to a listed Ademco control panel or power supply that provides a minimum of 4 hours stand by supply.

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APPLICATIONS AND MOUNTING TABLE

TYPE OF GLASS PROTECTED
1/8" and 1/4" Plate Glass
1/4" Tempered Glass
1/4" Laminated Glass
1/4" Wired Glass

SENSOR LOCATIONS

LOCATION	RECOMMENDED
Same wall as glass	Yes
Adjoining wall	Yes
Opposite wall	No