



INSTALLATION INSTRUCTIONS

No. 4192 SMOKE DETECTOR BASE/TRANSPONDER

MARGIN LINES INDICATE PRINCIPAL CHANGES IN THIS 1/88 ISSUE

GENERAL INFORMATION:

The ADEMCO No. 4192 PLUG-IN SMOKE DETECTOR BASE is a VECTOR POINT PROTECTION SECURITY SYSTEM component. It is intended for use with interchangeable UL Listed detector heads: Model BK-2851B (PHOTOELECTRIC); Model BK-2851BTH (PHOTOELECTRIC WITH BUILT-IN THERMOSTAT) and Model BK-1851B (IONIZATION). The base can be installed on a standard ceiling mount electrical box and both the base and the detector are powered through the polling loop.

IMPORTANT! The instructions which accompany the aforementioned detector heads only partially pertain to the No. 4192 SMOKE DETECTOR BASE/TRANSPONDER. The relevant sections are: **Preface; Specifications; SENSITIVITY TESTING AND MAINTENANCE, TAMPER-PROOF FEATURE, and LIMITATIONS OF SMOKE DETECTORS.**

OPERATION:

The ADEMCO No. 4192 DETECTOR BASE/TRANSPONDER communicates with the control by a single multiplex communication circuit (the polling loop). Security is maintained by the control which polls each transponder on the loop and each transponder responds with the status of its protection point. The base/transponder uses any one of three interchangeable detector heads to detect combustion.

NOTE: The detector head LED is **not used and will not function** when used in conjunction with the No. 4192.

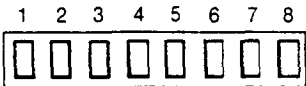
INSTALLATION:

WHERE TO INSTALL

For information regarding finding a suitable location for the detector head and its base/transponder, refer to the BRK manual 156-210, Application Manual for System Combustion Detectors (Available at **no charge** from BRK Electronics, System Sensor Division, 780 McClure Road, Aurora, IL 60504-2495).

PREPARING THE No. 4192

Before installing the No. 4192, it must be assigned an identification number by arranging the DIP switches on the base. Assign the number (allocated in the control's system programming worksheet) according to the following chart.



IDENTIFICATION NUMBERS ARE EQUAL TO THE SUM OF THE SWITCH VALUES LEFT IN THE "ON" POSITION
1 2 3 4 5 6 7 8 ← SWITCH NUMBERS
(128) (64) (32) (16) (8) (4) (2) (1) ← SWITCH VALUES
ON (INDICATED BY RED)
OFF (INDICATED BY RED)

OFF OFF OFF OFF OFF OFF OFF ON = 1
OFF OFF OFF OFF OFF OFF ON OFF = 2
OFF OFF OFF OFF OFF OFF ON ON = 3
OFF OFF OFF OFF OFF ON OFF OFF = 4
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OFF OFF ON OFF OFF ON OFF OFF = 36
OFF OFF ON OFF OFF ON OFF ON = 37

WIRING THE No. 4192

All wiring must be installed in compliance with the National Electrical Code and with all local codes. For complete information regarding the polling loop, refer to the instructions which accompany the control panel.

The following diagram illustrates the polarized polling loop wiring terminals and the ID number programming switch.

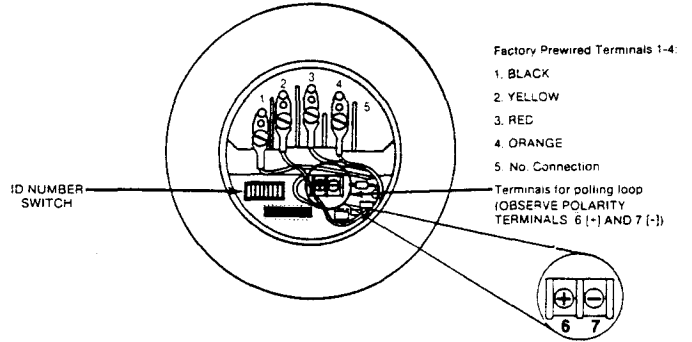


Diagram 1. TERMINALS AND ID SWITCH

NOTE: Two wires may be used under the same clamping plate, but the wire run must be broken at the terminal to maintain electrical supervision.

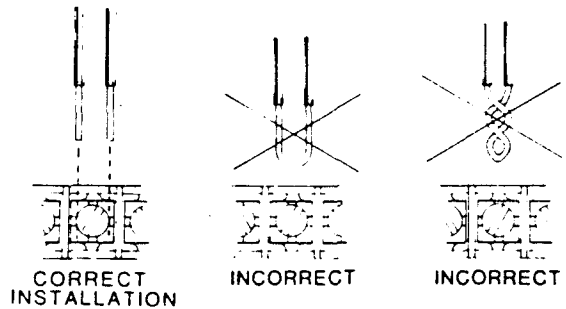


Diagram 2. CORRECT WIRING TECHNIQUE

When wiring the polling loop, observe the following gauge/length restrictions:

GAUGE	LENGTH (ft)*
22	650 (200m)
20	950 (290m)
18	1500 (460m)
16	2400 (730m)

*If multiple wire runs are extended from the control, the maximum total length of wire that can be connected to the polling loop is 4,000 feet (1220m), independent of wire gauge. If shielded wire is used, the maximum lengths in the table are not affected except for 16 gauge wire and the maximum total length of wire that can be connected to the polling loop. Those two numbers are now 2000 feet (610m). See typical wiring diagram 3 and also see typical mounting diagrams 4, 5 and 6.

Note that SMOKE DETECTOR BASE/TRANSPONDER can and should be installed on the same polling loop as burglary transponders.

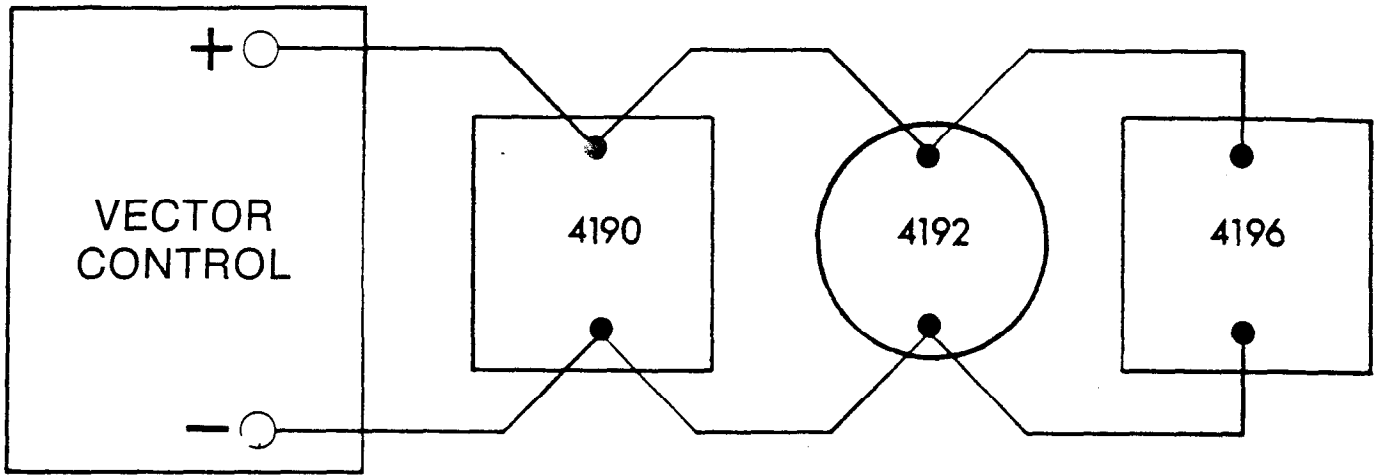


Diagram 3. TYPICAL WIRING TO VECTOR SERIES C-COM

MOUNTING THE No. 4192

The ADEMCO No. 4192 SMOKE DETECTOR BASE/TRANSPONDER mounts directly to 3-inch or 4-inch octagon junction boxes, or with the addition of a plaster ring or an ADEMCO specially designed adapter plate, to a 4-inch square junction box.

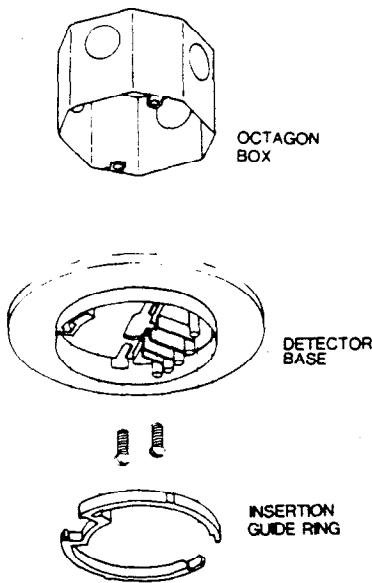


Diagram 4: TYPICAL MOUNTING DETAIL

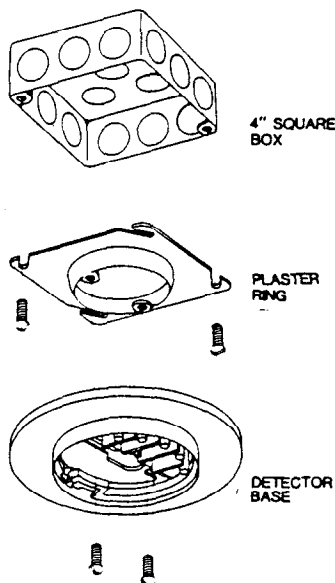


Diagram 5: DETAIL FOR MOUNTING DETECTOR BASE ON 4-INCH SQUARE JUNCTION BOX USING PLASTER RING

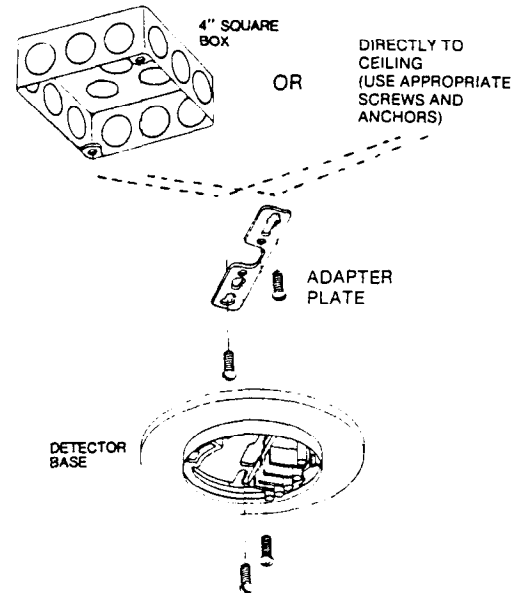


Diagram 6: DETAIL FOR MOUNTING DETECTOR BASE ON A 4-INCH SQUARE JUNCTION BOX, OR DIRECTLY TO CEILING, USING ADEMCO ADAPTER

NOTE: Only two mounting screws are provided with each detector base. The additional screws shown in Figure 5 and 6 for mounting the plaster ring or the adapter bracket on the square junction box may be supplied or purchased with the junction box.

TESTING THE INSTALLATION

Once all the detector bases have been wired and mounted, and the loop wiring has been checked, the detector heads may be installed in the bases. To install the detector heads, line up the terminals in the base with the holes in the bottom of the detector heads, insert the detector head, and turn it about 10 degrees clockwise until the detent clicks into place.

NOTE: If a detector goes into alarm, it will reset only if all products of combustion are cleared from the sensing chamber. If not, remove the detector head from the base to cut off its power. Then reinstall the detector head in the base.

TAMPER-PROOF FEATURE

These detector bases also include an optional tamper-proof tab that prevents removal of the detector without the use of a tool. The tab is slipped into a slot in the rim of the detector cover before the detector head is installed in the detector base. Then the locking tab is pushed into the base (See Figures 7A and 7B on the next page). This prevents the detector head from being turned counterclockwise and removed, unless the locking tab is first released. To remove the detector head, insert a small-bladed screw driver into release slot of tab and slide it out of the base. Then turn the detector head counterclockwise about 10 degrees.

CAUTION: TO AVOID POSSIBLE DAMAGE TO CIRCUIT, DISCONNECT BOTH POLLING LOOP WIRES AT CONTROL PANEL PRIOR TO INSTALLATION OR SERVICING THIS UNIT.

ALSO ONCE DETECTOR HEAD IS INSTALLED IN THE BASE, THE OPTIONAL TAMPER-PROOF TAB MUST BE PUSHED INTO THE BASE SO THAT WITHOUT TOOL, DETECTOR HEAD CANNOT BE REMOVED FROM THE BASE. (SEE FIGURES 7A AND 7B).

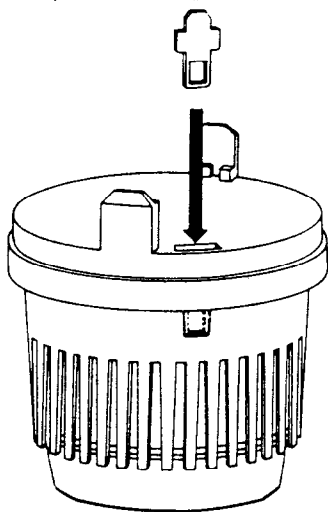


Diagram 7A: INSERT TAMPER-PROOF TAB INTO SLOT ON BOTTOM OF DETECTOR HEAD

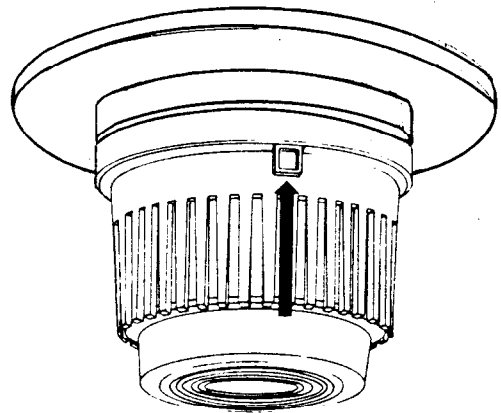


Diagram 7B: PUSH TAB INTO BASE AFTER INSTALLING DETECTOR HEAD IN BASE

SPECIFICATIONS:

DIMENSIONS:

BASE DIAMETER: 7.0 inches (17.8 cm)
 HEIGHT: 2.5 inches (6.3 cm)
 (DETECTOR & BASE)

WEIGHT: 1.0 lb. (454 gm)

OPERATING TEMPERATURE: 32° - 120° F (0° - 49°C)

HUMIDITY: 10% - 85% (RH)

ELECTRICAL RATINGS:

OPERATING VOLTAGE RANGE: 8 to 11VDC
 NORMAL STANDBY CURRENT: 0.43 mA
 CURRENT DRAW IN ALARM: 1.6 mA

MOUNTING

- A. 4" square box with plaster ring. Minimum depth 1-½".
- B. 4" octagon box. Minimum depth 1-½".
- C. 3" octagon box. Minimum depth 1-½".
- D. Direct to ceiling using sheet rock anchors.

MISCELLANEOUS

<u>Compatible Control Panel</u>	<u>Smoke Detectors and base</u>	<u>Maximum Detectors per panel</u>	<u>Wiring Diagram number and date</u>
Ademco model 4152, 4152ML	BRK models 1851B, 2851BTH, 2851B with 4192 base	29	N2014V2 1/87
4153, 4153ML	BRK models 1851B, 2851BTH, 2851 with 4192 base	37	N2759 9/87

LIMITATIONS OF SMOKE DETECTORS

Smoke detectors offer the earliest warning of fire possible at a reasonable cost. They have saved thousands of lives in the past and will save more in the future. Nevertheless, **smoke detectors have limitations.**

They may not provide early warning of a fire developing on another level of a building. A first-floor detector, for example, may not detect a second floor fire. For this reason, detectors should be located on every level of a building. In addition, detectors may not sense a fire developing on the other side of a closed door. In areas where doors are usually closed, detectors should be installed on both sides of the door.

Detectors have sensing limitations, too. Ionization detectors offer a broad range of fire-sensing capability, but they are better at detecting fast, flaming fires than slow, smoldering fires. Photoelectronic detectors sense smoldering flames better than flaming fires. Because fires develop in different ways, and are often unpredictable in their growth, neither type of detector is always best, and a given detector may not always provide warnings of a fire. In general, detectors cannot be expected to provide warnings for fires resulting from inadequate fire protection practices, violent explosions, escaping gas, improper storage of flammable liquids like cleaning solvents, other safety hazards, or arson.

TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system. 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 (at least weekly) to insure the system's proper operation at all times.

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 an Ademco date stamp, for 12 months from date of original purchase unless the installation instructions or catalog 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. Seller shall have no obligation under this Limited Warranty if the product is altered or improperly repaired or serviced by anyone other than Ademco factory service. For warranty service, return product transportation prepaid, to Ademco Factory Service, 165 Eileen Way, Syosset, New York 11791.

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