

**ADEMCO**

# INSTALLATION INSTRUCTIONS SUPPLEMENT

Telephone Line Noise Filter  
for  
**No. 685**  
**DIGITAL ALARM RECEIVER**

MARGIN LINES INDICATE PRINCIPAL CHANGES IN THIS 10/86 ISSUE

These instructions supplement, and should be used in conjunction with, the installation instructions for the No. 685 Digital Alarm Receiver

In some installations, electrical noise (spikes) may be carried on the telephone lines. In order to filter out these spikes, a filter adapter has been added to the No. 685 and a filter has been provided. The filter should be installed as follows:

**1. Remove AC and standby battery power from the No. 685.**

**2. Connect the filter box to the telephone line terminal block at the rear of the No. 685, as follows:**

- a. Note the cables with the spade lugs protruding from the filter box. Each jacketed cable has a RED and BLACK conductor and a 4" colored wire connected to the outer jacket and one of the other cables. The color of the 4" wire identifies each particular cable. The table below gives the wire colors corresponding to each telephone line.

Telephone Line Number	Wire Color	Telephone Line Number	Wire Color
1	BROWN	5	GREEN
2	RED	6	BLUE
3	ORANGE	7	VIOLET
4	YELLOW	8	GRAY

The RED and BLACK conductors with spade lugs on each cable represent the positive(+) and negative(-) phone wires, respectively.

- b. Starting with telephone line number 1, connect the appropriate jacketed cables to the corresponding telephone lines. The RED wire with the spade lug connects to the positive(+) telephone line terminal and the BLACK wire with the spade lug connects to the negative(-) telephone line terminal.

- c. The spade lugs connected to the 4" colored wires must be connected to the housing of the No. 685. Position the spade lugs of both the BROWN/RED pair and the ORANGE/YELLOW pair under the head of the screw located to the left of the telephone line terminal block. In the same manner, secure the spade lugs of the GREEN/BLUE and VIOLET/GRAY wire pairs under the head of the screw located to the right of the terminal block.

**3. Connect the Grounding Post (located at the rear of the No. 685, to the right of the serial output connectors) to a good earth ground.** A cold water pipe or electrical box may sometimes be used in this capacity. Preferably, a No. 16 AWG (or larger) wire should be used. **Note:** The two rightmost phone line strip terminals (17, 18) of the No. 685 (they may be marked EARTH GROUND) should be left disconnected.

**4. Connect the telephone lines to the terminal strip on the filter box as follows:**

Terminal	Connection	Terminal	Connection
1	Line 1 Tip(+)	11	Line 5 Tip(+)
2	Line 1 Ring(-)	12	Line 5 Ring(-)
3	Line 2 Tip(+)	13	Line 6 Tip(+)
4	Line 2 Ring(-)	14	Line 6 Ring(-)
5	Line 3 Tip(+)	15	Line 7 Tip(+)
6	Line 3 Ring(-)	16	Line 7 Ring(-)
7	Line 4 Tip(+)	17	Line 8 Tip(+)
8	Line 4 Ring(-)	18	Line 8 Ring(-)
9	[Connect to the Grounding Post on the No. 685's chassis (see Step 3), preferably with a No. 16 AWG (or larger) wire.]		
10			

(OVER)

5. **Connect the pair of standby battery cables (with RED and BLACK wires) in parallel, as described in the No. 685's instructions. These cables incorporate capacitors to filter out voltage spikes.**  
The smaller black wires with the spade lug should be secured under the head of one of the screws on the side of the No. 685.
6. **The Remote Alert cable (WHITE and BLACK wires) provided incorporates capacitors to filter voltage spikes.**

**Note:** When this cable is used, only voltages of 12 volts DC, or less, may be used to power the remote alert sounder.

The single spade lug attached to the two BLACK wires should be secured under the head of one of the screws that secure the back of the No. 685.

Apply power to the No. 685. Press the SYSTEM TEST button to initiate a test of the telephone lines. If a telephone line fault shows up, check the polarity and/or voltage of the corresponding telephone line at the rear of the No. 685.

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