

**VISUALLY IMPAIRED ATTENDANT SERVICE—  
990A LIGHT SENSOR AND 87A CONTROL  
UNIT USED WITH PBX CONSOLES—  
MAINTENANCE AND TROUBLE LOCATING  
PROCEDURES**

**1. GENERAL**

**1.01** This section provides maintenance and trouble locating information for the 990A light sensor and 87A control unit (Fig. 1) for use with PBX consoles other than DIMENSION® PBX consoles. Visually impaired attendant service for use with DIMENSION PBX attendant consoles is described in Section 554-191-170 and operating procedures are described in Section 554-191-112.

**1.02** When this section is reissued, the reason for reissue will be listed in this paragraph.

**2. MAINTENANCE**

**2.01 *Headset Tone Volume***—The headset tone volume can be adjusted to the attendant personal level by holding the sensor near a lighted lamp or 1/2 inch from a light emitting diode (LED) as the adjustment is made. Listen for the tone, and using a 1/8 inch or smaller blade screwdriver, insert the tip into the .150 inch hole on right side of control unit. Turn clockwise to increase volume.

**2.02 *Battery Replacement***—The batteries in the 87A control unit should last for 1 year of normal use (approximately 2,000 hours), or 6 months of continuous use, and should be replaced with KS-14368 or similar batteries (AA, 1.5 volt penlight). To remove case cover refer to paragraphs 3.03 and 3.04.

**3. TROUBLE LOCATING**

**3.01** If trouble develops in the sensor or control unit, perform the volume adjustment procedure

in paragraph 2.01. If unable to adjust the tone volume, perform the following test.

**3.02** Point the light sensor toward a bright lamp or close to an LED. A tone should be heard in the headset. If a tone is not heard (sensitivity is low with green LEDs), remove the 990A light sensor and replace it with a miniature phone plug (Switchcraft No. 750 or equivalent) shorted across the terminals. If a tone is heard, replace the 990A light sensor with another sensor. If the unit does not operate, remove all cords and disassemble the control unit (refer to paragraph 3.03).

**3.03** Turn the 87A control unit upside down and remove the two screws in the bottom. Hold the unit in the left hand with the front face toward the right hand. Place the right thumb on the front center jack, and push toward the case bottom. Front face and bottom will slide out of housing. Cables will hold the housing and front together (Fig. 2).

**3.04** Remove the battery holder (held in place by a hook and loop tape fastener) by pulling it free from the battery bracket. Replace batteries. The negative terminal of the battery goes toward the spring in the battery holder. Press battery holder back onto battery bracket and check unit for operation. If a tone is heard, reassemble the control unit. If no tone is heard, check cables (Fig. 3).

**3.05** If unit still does not operate, replace the unit with another 87A control unit and return the nonoperational 87A control unit for service.

**NOTICE**

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Bell System except under written agreement

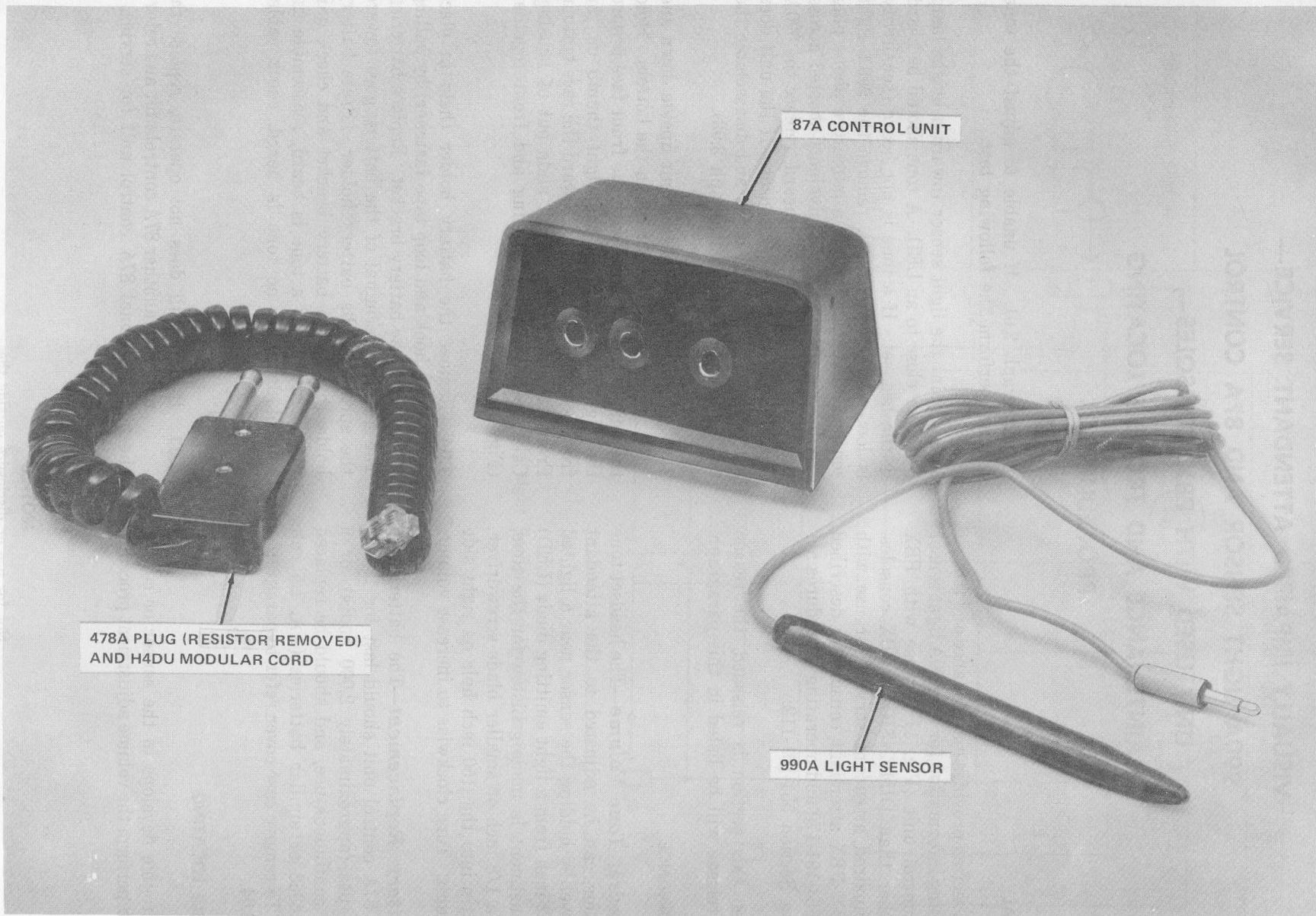


Fig. 1—Control Unit, Light Sensor, and Cord Assembly

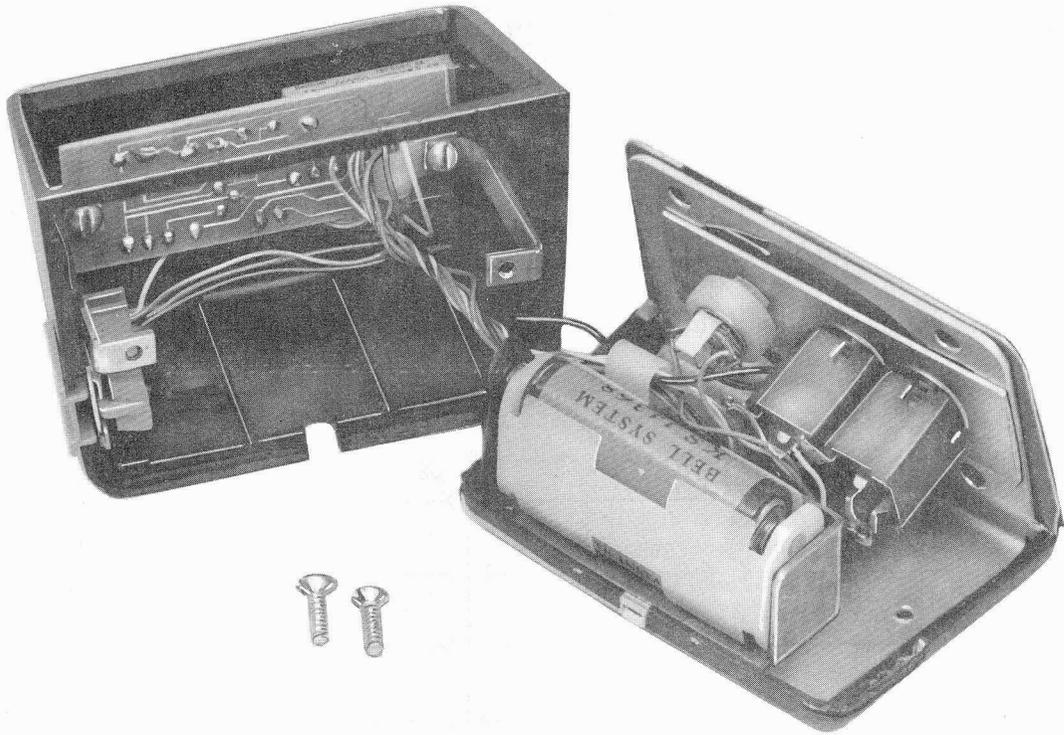


Fig. 2—Control Unit, Cover Removed

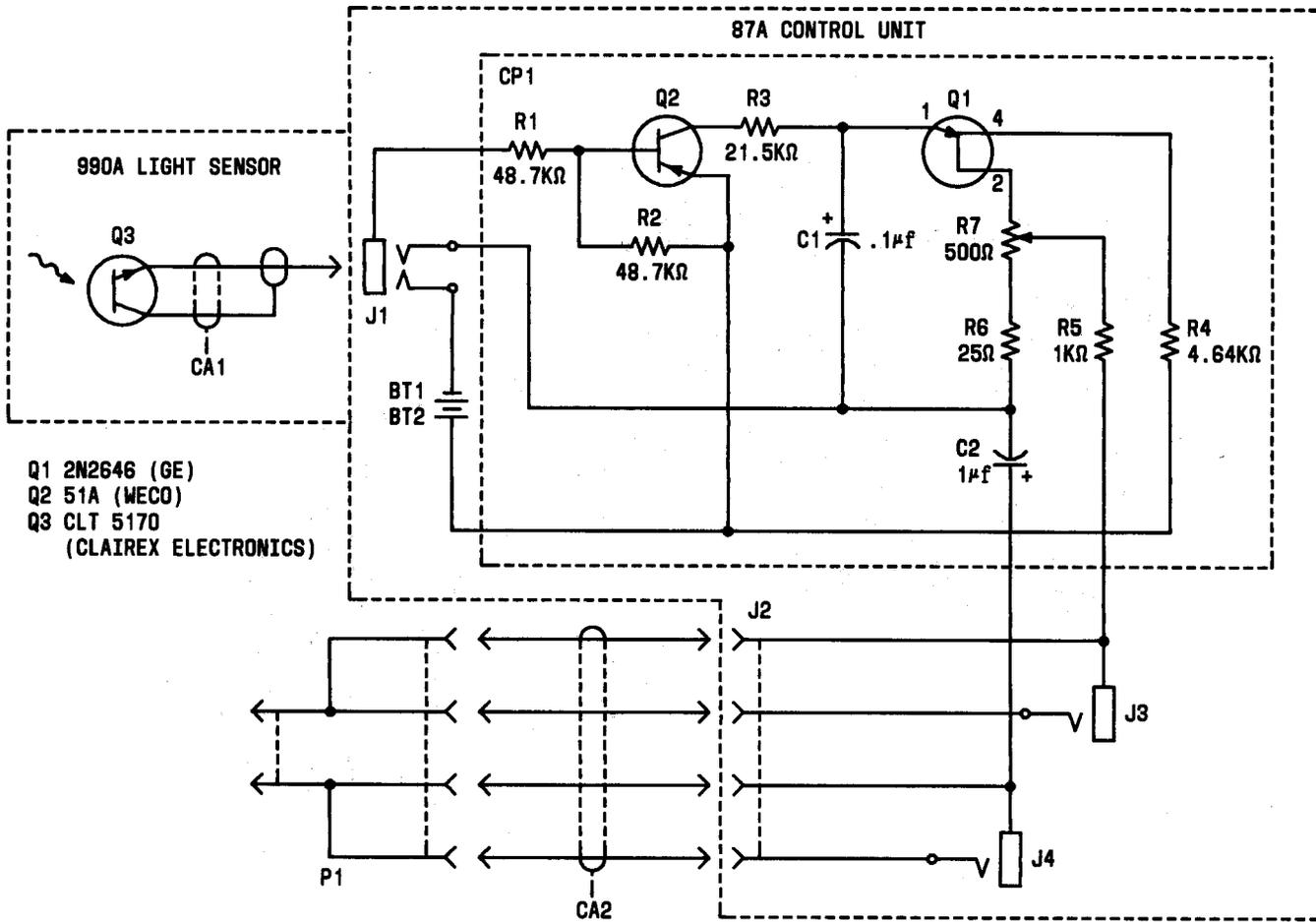


Fig. 3—Control Unit and Light Sensor—Schematic Diagram