



RS505 UNIVERSAL SPEAKER MODULE INSTALLATION

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PRELIMINARY

DESCRIPTION

The RS505 Speaker Module consists of a 2¼-inch (7-cm) dynamic speaker-microphone mounted on a beige plastic faceplate. The speaker transformer has taps for a 25-volt, one-half-watt input plus a center tap; the wires have the same color coding as those of the USO188 speaker. As its mounting hole indicates, the module is designed to be used together with a matching series of switches and stations.

APPLICATIONS

The speaker module can be used with the Director Series Control Panels, and Telecenter[®] IV, Telecenter[®] 5000, Telecenter[®] 5500, and Responder[®] 3000 systems. A variety of switches and stations can be mounted in it, including the RS502 Room Station, RS504 Door-Entry Station, RS506 Pull-Cord Station, RS507 Push-Button Station, RS508 Call/Emergency Station, P2307 Call-Privacy

Switch, BS300 Bedside Station, SS300 Staff Station, and BS800 Dual-Patient Station.

This manual will not attempt to describe the many possible combinations of switches and system applications to which this versatile module will lend itself. Instead, it will explain the general principles involved and provide wiring diagrams of two typical installations (see KM0685 and IL0239). This information, together with the manuals for the switches, stations, and systems, should prove adequate for most installations. For more specialized applications, consult with Rauland-Borg's Sales Engineering Department.

PACKAGING

The RS505 comes in a box with four #6-32 × 1" black Phillips binder-head screws. There are twelve boxes per carton, and four cartons (48 RS505s) in a master case. The modules may be ordered individually.

INSTALLATION

MECHANICAL INSTALLATION

The speaker module is designed to be mounted onto a three-gang back box. The boxes in the table below are the only ones recommended.

Source	Model	Description
Steel City	3G	3-gang back box with a 3GC plaster ring.
Raco	952	3-gang back box with an 822 plaster ring.
Steel City	GW-335-C	3-gang masonry box.
Raco	692	3-gang masonry box.
Wiremold	57445-3	3-gang surface-mount box.

Other three-gang boxes may or may not fit.

Refer to the attached IL0238 for typical mounting instructions. Note that the module should be mounted horizontally, with the speaker on the right. With this orientation, the openings in the speaker grille face downward, for a neater appearance.

Mounting Screws

Use two of the supplied binder-head screws to secure the right (speaker) side of the module to the back box. Use the screws supplied with the switch or station to secure it and the left side of the module to the back box.

ELECTRICAL INSTALLATION

The three wires emerging from the printed circuit board are connected to the taps on the speaker transformer shown in the following table:

RS505 Wire	Speaker Function
Red	½ Watt
Black	Common
Yellow	Center Tap

Provided that its half-watt rating is observed, the speaker can be connected to any 25-volt audio source. Its wires have the same color coding as those of the USO188 speaker, so any Rauland instructions for wiring the latter

RS505 Universal Speaker Module

to a Director, Telecenter, or Responder system can be used for the RS505.

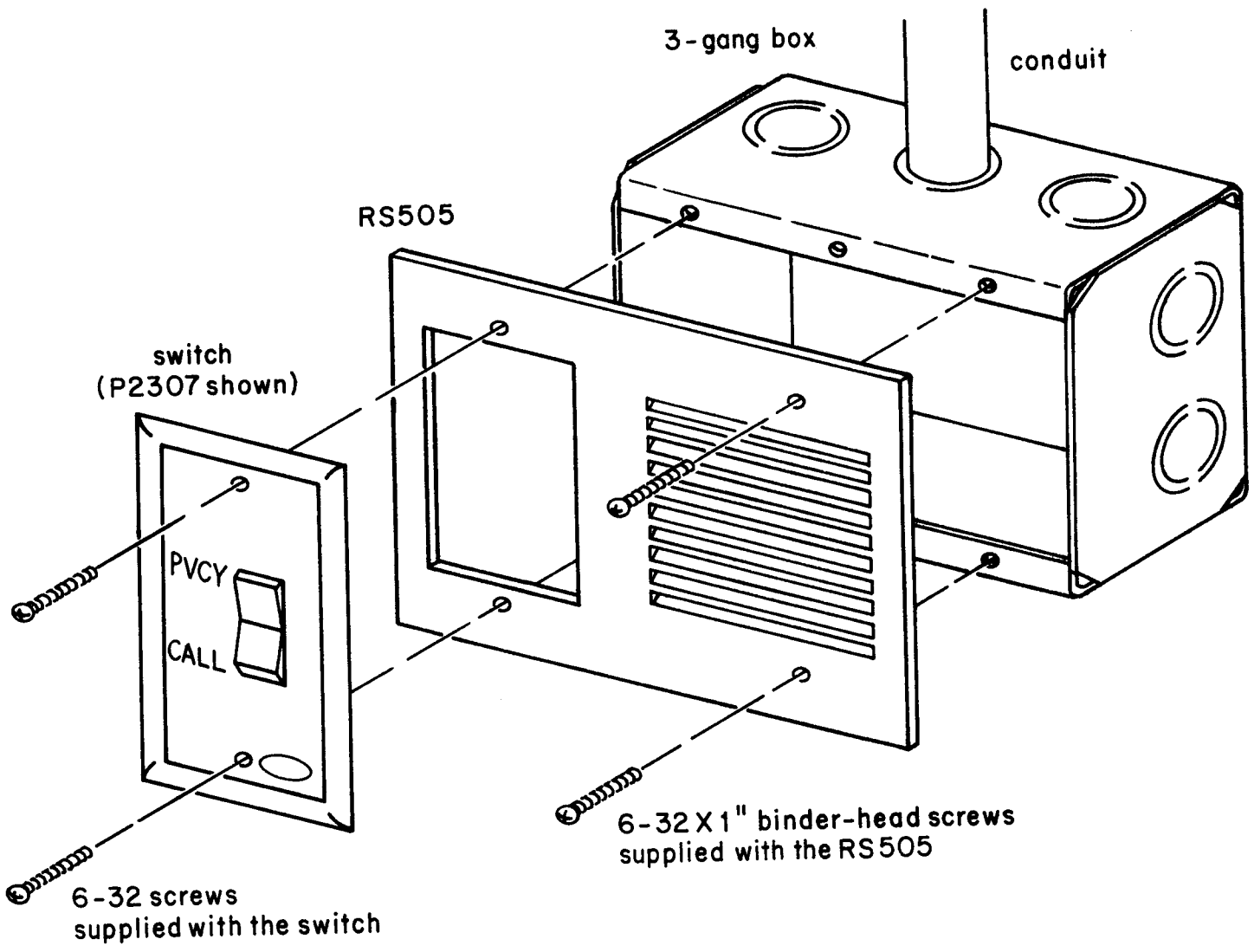
Mating Electronics

The TC5000, TC5500, and NCS3000 require an electronic circuit at a call-in station. Such a circuit is provided on stations designed for these systems, such as the RS502 and the BS300. For TC5000 and TC5500 systems, a more general-purpose switch, such as the RS507 Push-Button Switch, can be given this mating circuitry by adding an RS501 Call Module. For Responder 3000 systems, the RS505 can be used with BS300, BS800, and SS300 stations (provided that the SS300's internal speaker is disconnected. See IL0239). Information on wiring this module to a switch and the RS505 is provided in the RS501 manual, KI-1471.

Jumper "JU1"

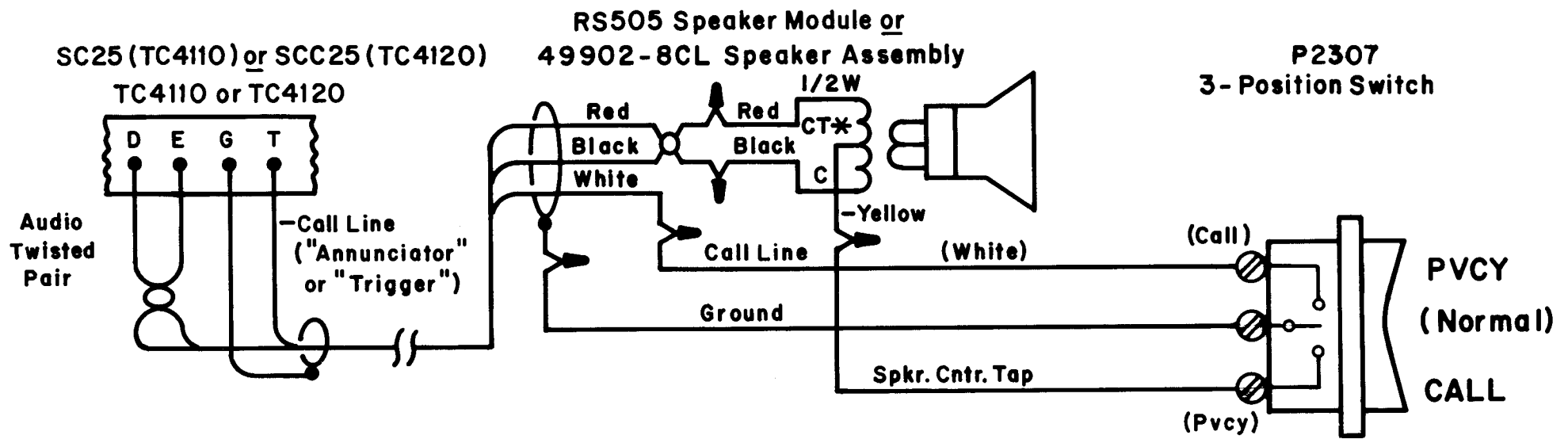
The TC5000, TC5500, and NCS3000 have 14 VDC on their audio output terminals to the room stations. Each room station needs a DC-blocking capacitor to prevent a DC current from passing through its speaker transformer. Such a capacitor is on the PC board of the RS505.

As the module comes from the factory, Jumper *JU1* bypasses this capacitor, which is not needed by Telecenter IV or Director Series systems. A capacitor is also provided by the BS800 Dual-Patient Station, RS501 Call Module, the RS502 Call Station, and the RS503 Staff Telephone Adapter. Thus, in all these applications, the jumper should be left in place. On other TC5000, TC5500 and NCS3000 applications, where the capacitor is needed, cut Jumper *JU1* on the RS505's printed circuit board.



Note: On some switches, the mounting screws go beneath the escutcheon plate, which is secured with a separate #4 screw.

RS505
UNIVERSAL SPEAKER MODULE
Typical Mounting
ILO238



Cabling from the Control Console to Staff Stations:

- 3-Conductor Shielded Cable containing:
- 1 twisted pair
 - 1 single conductor

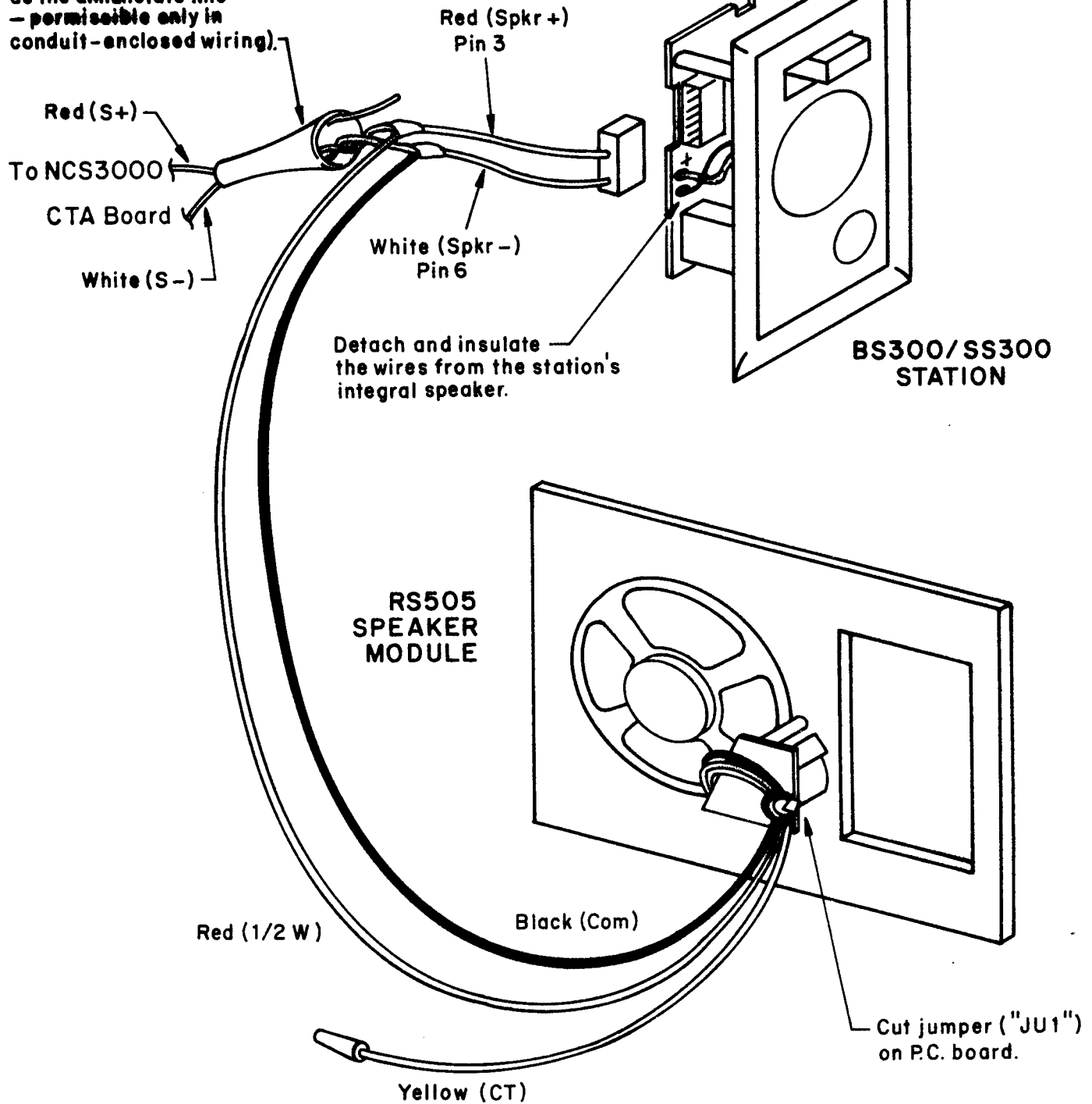
Maximum Length:

- 1500 ft. (22 AWG)
- 2400 ft. (20 AWG)
- 3800 ft. (18 AWG)

* On the 49902-8CL (and US0188) speaker only, the center tap is marked "2W."

**STAFF STATION with
Speaker and
Call-Privacy Switch
KM0685 D**

Cut and insulate the shield (unless it is used as the annunciate line - permissible only in conduit-enclosed wiring).



RS505 SPEAKER MODULE
Interconnection with a Typical Room Station
in an NCS3000 System
ILO239 C