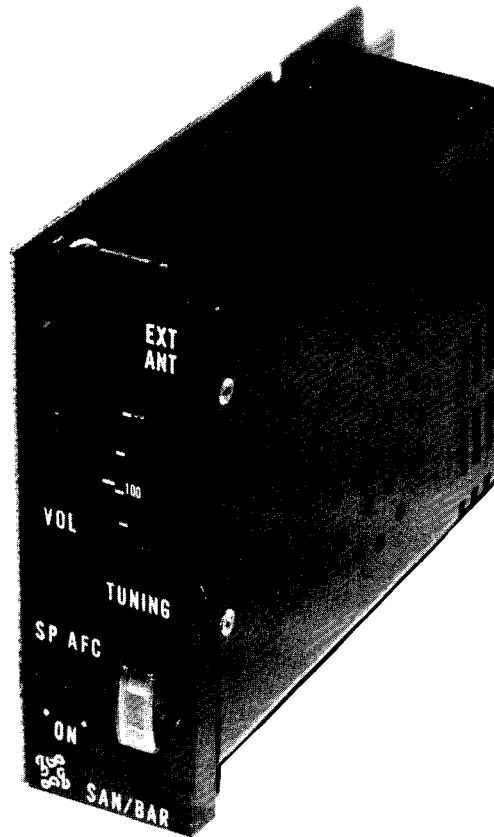


# SAN/BAR CORPORATION

MODEL SB4201A FM RECEIVER  
FOR MUSIC-ON-HOLD SERVICE



The SB4201A FM receiver is a complete, compact, easy to install music source designed to be used in conjunction with SB4200A KTU line cards to provide music-on-hold in 1A2 and 10A2 key telephone systems.

The SB4201A receiver is mounted on a 18-pin KTU line card-size circuit board which eliminates the need for bulky, expensive external FM receivers or a separate music source.

Installation is accomplished by simply inserting the SB4201A in any KTU line card position and breaking battery and ground straps on the back of the KSU.

The music is transmitted from the SB4201A to the SB4200A line cards on pins 3 and 18 via common straps in the KSU. One SB4201A is normally sufficient to provide a music source for an entire key system.

## SPECIFICATIONS

### ELECTRICAL CHARACTERISTICS

- a. Power Source:
 

Ground	Pin 15
-24V + 7V	Pin 17
- b. Power Consumption:
 

At no signal	1.6W.
At maximum output	3.6W
- c. Antenna Impedance:
 

300 ohms	
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- d. Audio Output Impedance:
 

8 ohms	
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- e. Maximum Audio Output:
 

200 mw at 1,000 Hz, 8 ohms load	
	Pin 3
	Pin 18
- f. Frequency Output:
 

150 Hz to 4,000 Hz	
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- g. FM Tuning Range:
 

88 M Hz to 108 M Hz	
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### PHYSICAL CHARACTERISTICS:

Size: 4-3/4" x 3-1/2 x 1-5/16"

#### Antenna:

Built-in or external at user option. External antenna connect to pins 12 and 13.

#### Automatic Frequency Control:

On/Off switch on front panel

#### Volume Control:

Potentiometer on front panel  
(Adjust via screw driver.)

#### Speaker Control Switch:

Switch on front panel directs audio output to pins 3 and 18 for MOH or internal speaker to monitor tuning adjustment.

V.U. meter on front panel: indicates power output level.

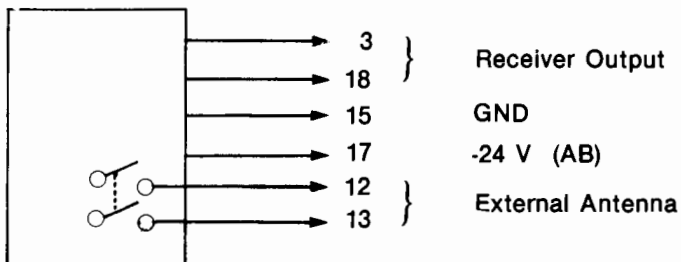
#### APPLICATION NOTE:

- a. Although most users prefer to install the SB4201A directly in a vacant KTU connector in the key service unit, some users prefer to install the SB4201A outside the key service unit.

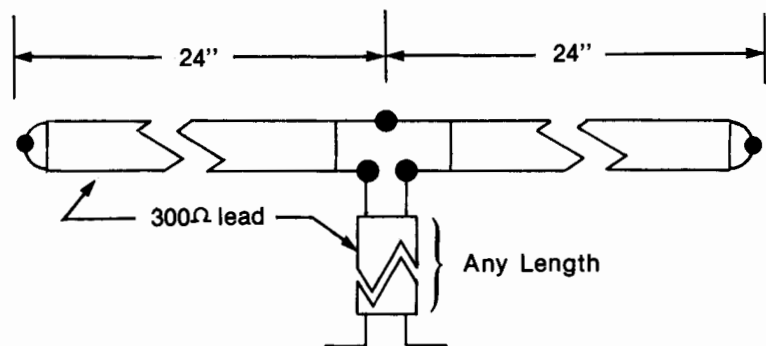
The SB302A-1, a single connector wallmounted card cage is available for external mounting applications.

- b. In those cases where there is not a vacant KTU connector in the KSU for the SB4201A, the SB318A mounting shelf is recommended.

#### FM RECEIVER



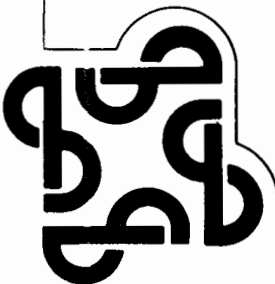
INTERFACE DIAGRAM

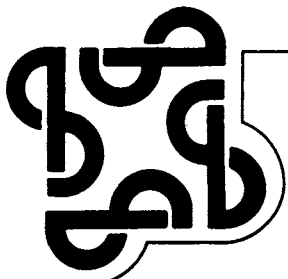


FOLDED DIPOLE ANTENNA

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## INSTALLATION INSTRUCTIONS FOR MODEL SB4201A FM RECEIVER

The SB4201A may be installed in any of the standard 18 pin line card receptacles on most key telephone systems (KTS) or key service panels (KSP) if the following steps are observed:

- STEP 1** Pin 3 of each connector is usually connected to every other pin 3 and then terminated at "A" battery ground. Similarly, pin 18 of each connector is multipled together and terminated at -24 VDC "A" battery. It is necessary to isolate these multiples from the "A" battery by either removing the fuse or removing the cross-connecting clips at the type 66 block. If it is necessary to retain the "A" battery connection for the Manual Intercom feature of the key system, it will be required to separate the multiples to prevent "A" battery from shorting out the music across pins 3 and 18.
- STEP 2** The volume level comes preset from the factory when used with the SAN/BAR 4200A Line Card(s). Should an adjustment of the receiver volume be required the following procedure may be used:
- With the SB4201A installed in the desired receptacle, set antenna switch to "internal" position.
  - Turn speaker switch "on". (This will disconnect the receiver from the music-on-hold path and enable the installer to hear output.)
  - Set AFC switch to "off" position.
  - Select station and adjust volume to an appropriate level.
  - Set AFC switch to "on" position.
  - Set speaker switch to "off" position and verify that the correct adjustments have been made by listening through a line placed-on-hold. If required repeat steps 2b thru 2f.
- STEP 3** If the reception quality is not acceptable, an external antenna may be employed. The antenna may have to be placed outside and a feed line brought in, if the walls of the building are concrete.
- Disconnect the station tip & ring leads on the equipment side of the R66 block (pin 12 & 13) for the receptacle that the transmitter is applied to. Cap & stow the leads.
  - Connect a folded dipole antenna, 48 inches long minimum, to the R66 block at pins 12 & 13. (See Figure 2)
  - Set antenna switch on the receiver to "external" position and tune in accordance with 2b thru 2f.

FM RECEIVER

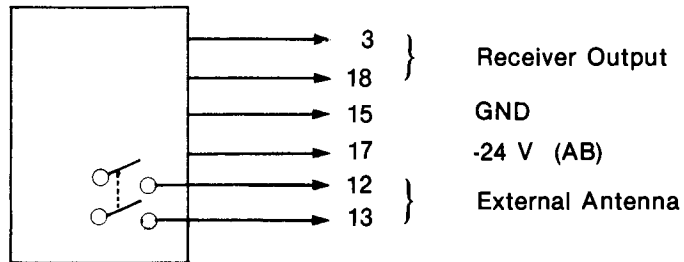


FIGURE 1 INTERFACE DIAGRAM

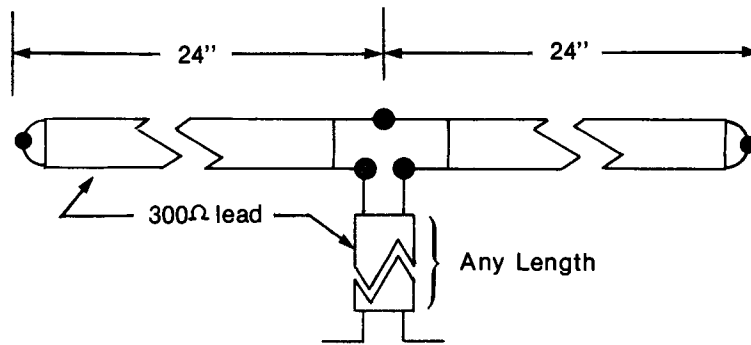


FIGURE 2 FOLDED DIPOLE ANTENNA

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