## 100 Series Intercom Stations

1.   Intent & Scope

This document describes the installation procedure for the 100 series intercom stations.

2.   Description

The 100 series of intercom stations include all intercom stations that are designed to be connected to the system via an SAB-100 station audio board. Each 100 series intercom station is connected to the system with a single shielded twisted pair cable that carries all the microphone, loudspeaker, switch, and indicator signals.

pin 1
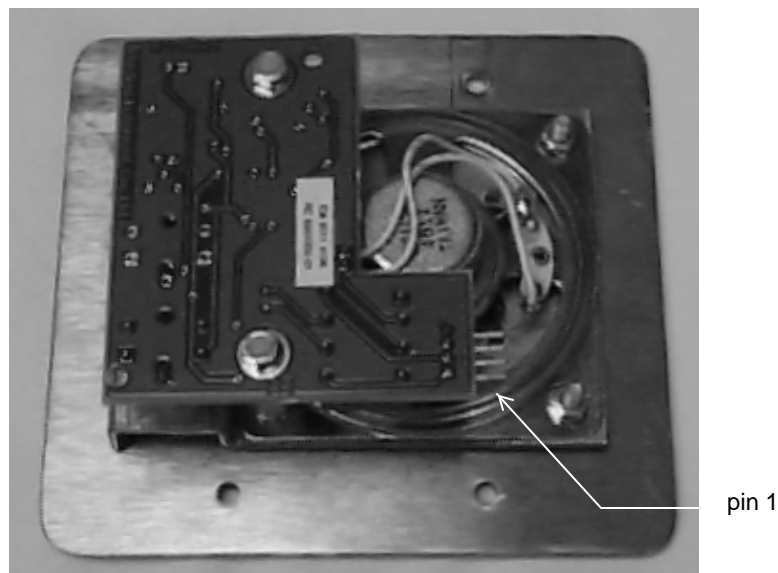
Intercom Station - Rear View

3.   Installation

The intercom stations are connected to the exchange with a single shielded twisted pair. The shields are all grounded at the exchange end through the DB-50 connector and terminated through the BIX field interface block. They are all left open at the intercom station end of the cable. Where the cable is connected to another cable the shields must be continued from one cable to the other and care should be taken to ensure that the shields on the different signal pairs are not connected together.

The connections to the intercom station are made with an AMP MTA-100 series connector. The intercom pair should connect to pins 1 and 2 on the intercom station. To make these connections you should use an AMP tool 58074-1 with a 58246-1 head. The cable should be cut to length and the shield and outer jacket should be trimmed

back about 1/2 inch. Ensure that the shield is not exposed or it may short out exposed contacts on the intercom PCB when it is installed.

The pin configuration of the station connector is:

MTA Pin	Signal
1	audio +
2	audio -
3	N/C
4	N/C

To insert the signal wires into the connector you remove the white cover from the connector, insert the connector into the tool from the left side (it will travel through the tool in the direction indicated by the arrow), pull the trigger once to load the connector. Then insert the signal wire for pin 2 (do not strip the wire) into the hole on the top of the tool and pull the trigger to insert the wire into the connector. Then repeat to install the other signal wire. Finally, remove the connector from the tool, replace the cover, and then slide the connector onto the pins on the intercom station.

The intercom station can now be fastened to the back box.

4.   ICM-120 Horn Talkback Intercom Station

The ICM-120 intercom station is similar to those described above except that instead of using an internal loudspeaker, it is connected to an external horn to provide its loudspeaking function. It still contains a call switch and an internal microphone for audio input signals. The perforated area where the loudspeaker normally resides is deleted.

Installation of the unit is similar to any other intercom station. The only difference is that pigtail leads are provided for connection to the horn loudspeaker. Note that the horn loudspeaker requires a 25 volt line matching transformer tapped for a maximum 1 watt power draw.

5.   ICM-125 Telephone Handset Intercom Station

The ICM-125 telephone handset station connects to the intercom system in the same manner as any standard intercom station. However, instead of a loudspeaker and microphone, it communicates through a handset mounted on a hookswitch. Instead of pressing a pushbutton to place a call request, lifting of the handset from the hookswitch places the call request.

Note: It is advisable to install two pairs of cable for each handset location and reserve two station audio board inputs to facilitate any future upgrade to a full duplex handset unit.

## 6.   ICB-100 Intercom Board (Talkback Kit)

ICB-100 Intercom Board talkback kits are installed on standard 8" loudspeakers to permit them to operate the same as any intercom station. The units consist of a station board with a remote microphone and pigtail leads to connect the loudspeaker and, if desired, remote call request buttons.

The ICB-100 is designed for mounting to a loudspeaker unit that incorporates a 1/4" thick security baffle such as a Lowell SQLK-8.

To install the ICB-100, first the microphone shock mount must be mounted on the rear of the baffle plate as in the following illustration. To do so, place the shock mount so that the microphone will be located behind open perforations and the shock mount mounting flanges will be located over the baffle grid. Ensure that it is situated to not interfere with the low clearance outer edges of the loudspeaker, or loudspeaker whizzer cone.

Once the proper mounting location has been determined, mark the shock mount mounting holes and use a 3/32" bit to drill approximately 3/16" into the baffle grid members. Mount the microphone shock mount with two #4 x 3/8" self tapping screws.

Open
Perforations

Baffle Grid

Microphone
Grommet
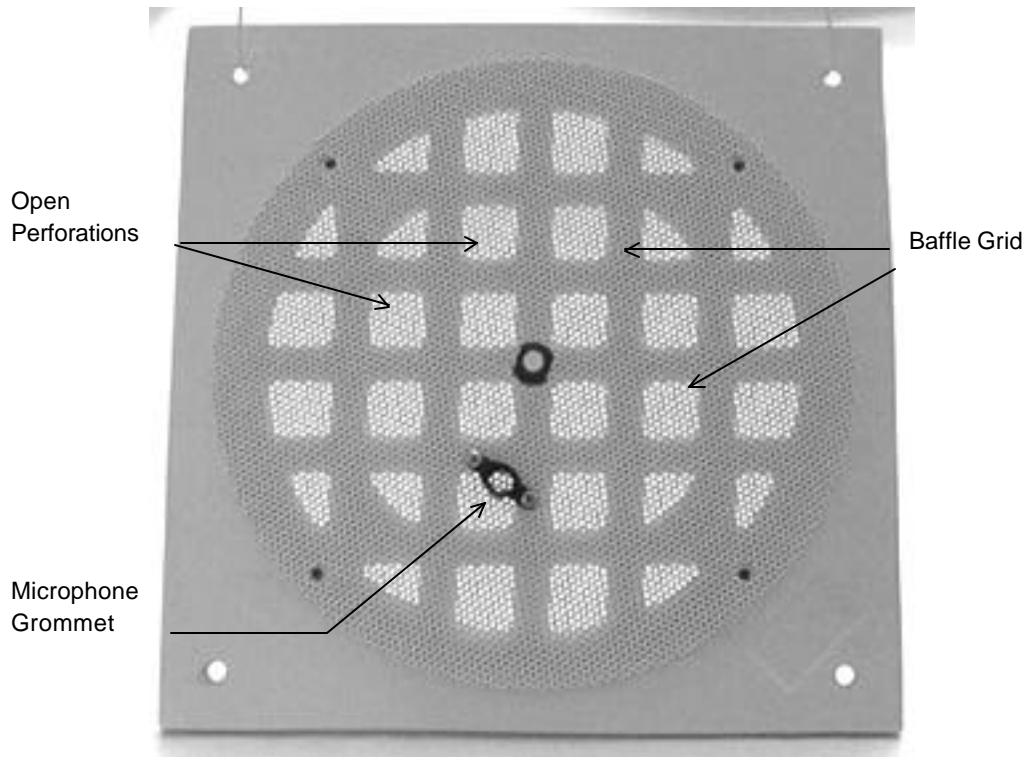
Microphone Shock Mount Installation

After the microphone shock mount has been installed, insert the microphone into the shock mount. Take care not to damage the terminals on the microphone. After the microphone has been installed, the loudspeaker can be mounted to the baffle. The wiring from the microphone will run between the baffle and the loudspeaker to the talkback board.
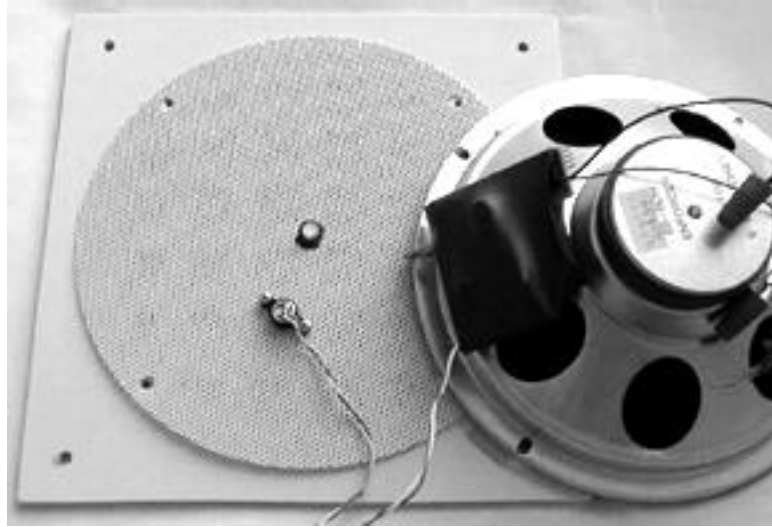
Talkback Kit Microphone Installed

The circuit board of the talkback kit is encased in a non-conductive heat shrunk case with two strips of Velcro mounted on the back. Remove the exposed adhesive protective strip from the Velcro and gently press the talkback kit on to a convenient mounting location on the loudspeaker cone frame as in the following illustration.
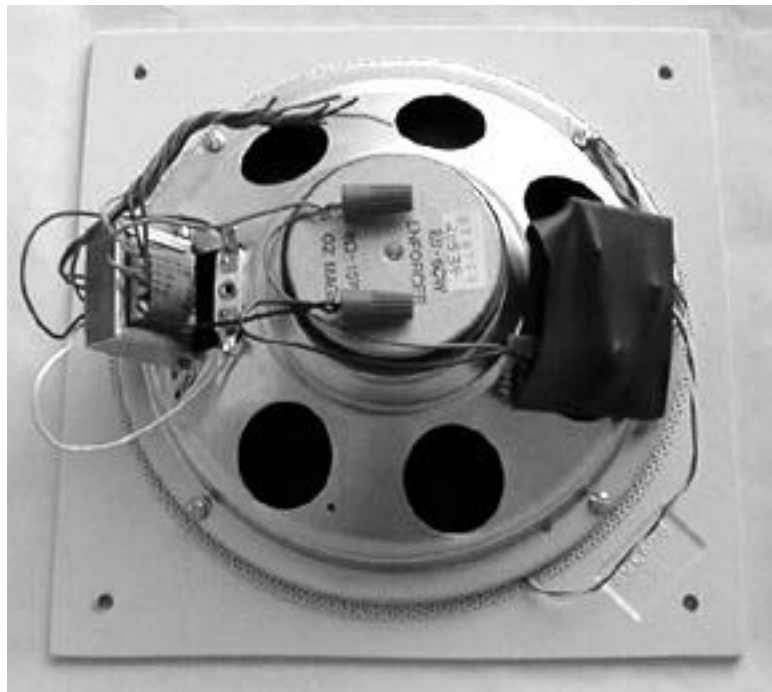
Talkback Kit Installation Complete

Finally, make the electrical connections to the talkback kit for the loudspeaker and optional switches. The loudspeaker connection must be made through a 25 volt matching transformer at a power tap not exceeding one watt. The following table gives the wire colors and signals for the ICB-100 Intercom Talkback kit.

Wire	Signal
Orange	Mic -
White	Mic +
Black	Speaker
Green	Speaker
Yellow	Switch 1
Yellow	Switch 1
Red	Switch 2
Red	Switch 2

The intercom talkback unit is connected to a station audio board the same as any other intercom station via the MTA connector. The following table gives the pin configuration for the MTA connector.

MTA Pin	Signal
1	audio +
2	audio -
3	N/C
4	N/C