



INSTALLATION INSTRUCTIONS

MicroComm DXI

PAB-100/400 Paging Amplifier Board **TAB-100/400 Talkback Amplifier Board**

1. Intent & Scope

This document describes the installation procedure for the PAB-100 and PAB-400 Paging Amplifier Boards, and the TAB-100 and TAB-400 Talkback Amplifier Boards.

2. Description

The Paging Amplifier Board (PAB) has eight constant voltage output channels that are used to drive paging loudspeaker circuits. Each channel's power output is rated at 5 watts at either 25 volts or 70 volts, depending on the board version.

A Talkback Amplifier Board (TAB) provides eight high power intercom channels for communication through standard cone loudspeakers or horn loudspeakers. In addition to their intercom capability, talkback loudspeakers may also be configured as loudspeaker paging circuits.

Each loudspeaker connected to a paging amplifier board circuit must be equipped with an appropriate 25 volt or 70 volt loudspeaker matching transformer, depending on the PAB model. Loudspeaker matching transformer taps must be set so that the total audio power load on each circuit does not exceed 5 watts.

PAB-100/400 Paging Amplifier Board
TAB-100/400 Talkback Amplifier Board



PAB-100

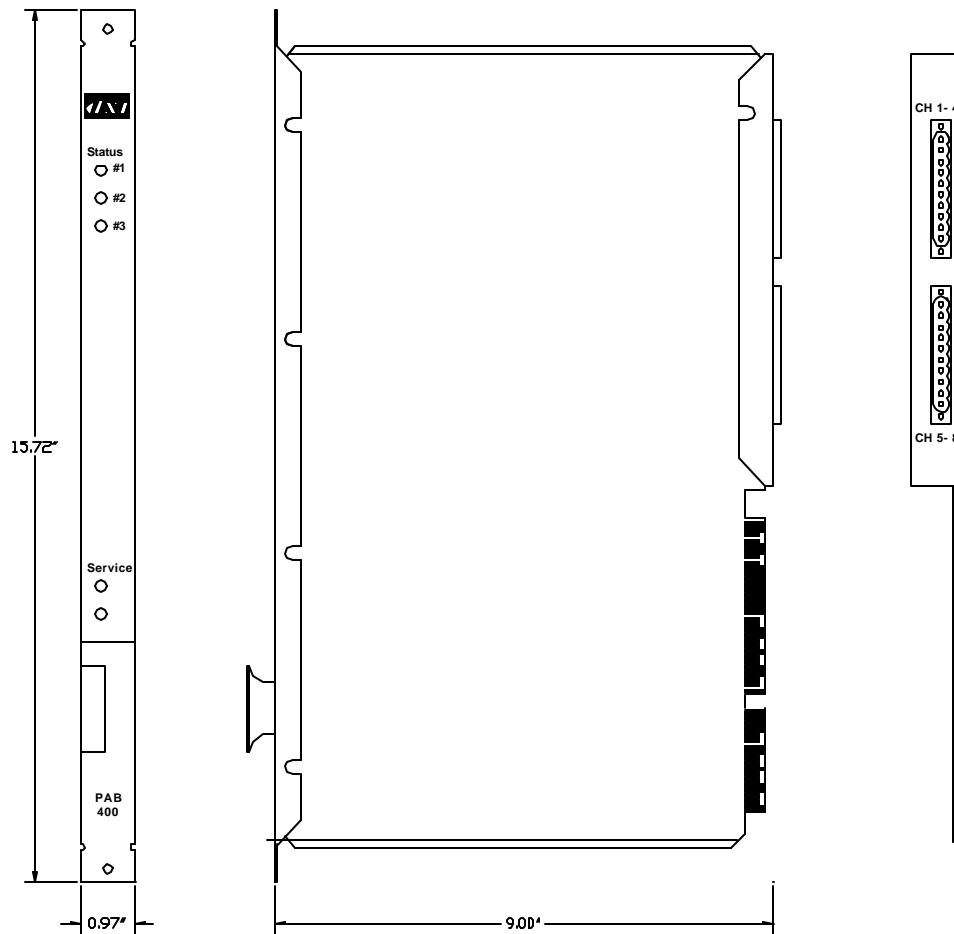
3. Power Requirements

Each paging amplifier board draws approximately 6 amps of power supply current when operating at full power output. Therefore, it is recommended that no more than three PAB's be installed in a card cage that is fully populated with other boards. If the PAB circuits are not fully loaded or to be run at full output power, or if there are only a few other boards in the card cage, additional paging amplifier boards may be installed, as long as the card cage power supply current rating is not exceeded.

4. Field Interface Wiring

Field wiring is made to two connectors on the back of the paging amplifier board. The location of these connectors is shown in the following mechanical drawing.

PAB-100/400 Paging Amplifier Board TAB-100/400 Talkback Amplifier Board



Connector Location for Paging/Talkback Amplifier Boards

The following tables give the pin numbers, wire colors, and terminal block position for each of the paging amplifier board signals when a CBL-150 field wiring interface cable is used. The first table is for generic terminal blocks, while the second table is for BIX style terminal blocks. The cables should be terminated on the terminal block in the fashion shown below. Pins 25 to 50 on the terminal block are not used. If desired, a second CBL-150 may be terminated on the same terminal block in the same sequence using pins 25 to 48.

**PAB-100/400 Paging Amplifier Board
TAB-100/400 Talkback Amplifier Board**

Wiring Table for Generic Terminal Block

Combicon Pin Number	Signal	PAB/TAB Cable Wire Colors	Terminal Block Pin Number
1-1	Audio 1+	Black	1
1-2	Audio 1-	Red	2
1-3	Audio 1 & 2 Shield	BR Shield	3
1-4	Audio 2+	Black	4
1-5	Audio 2-	White	5
1-3	Audio 1 & 2 Shield	BW Shield	6
1-6	Audio 3+	Black	7
1-7	Audio 3-	Green	8
1-8	Audio 3 & 4 Shield	BG Shield	9
1-9	Audio 4+	Black	10
1-10	Audio 4-	Blue	11
1-8	Audio 3 & 4 Shield	BBI Shield	12
2-1	Audio 5+	Black	13
2-2	Audio 5-	Red	14
2-3	Audio 5 & 6 Shield	BR Shield	15
2-4	Audio 6+	Black	16
2-5	Audio 6-	White	17
2-3	Audio 5 & 6 Shield	BW Shield	18
2-6	Audio 7+	Black	19
2-7	Audio 7-	Green	20
2-8	Audio 7 & 8 Shield	BG Shield	21
2-9	Audio 8+	Black	22
2-10	Audio 8-	Blue	23
2-8	Audio 7 & 8 Shield	BBI Shield	24

Wiring Table for BIX Terminal Block

Combicon Pin Number	Signal	PAB/TAB Cable Wire Colors	Terminal Block Pin Number
1-1	Audio 1+	Black	1
1-2	Audio 1-	Red	2
1-3	Audio 1 Shield	BR Shield	3
1-3	Audio 2 Shield	BW Shield	4
1-4	Audio 2+	Black	5
1-5	Audio 2-	White	6
1-6	Audio 3+	Black	7
1-7	Audio 3-	Green	8
1-8	Audio 3 Shield	BG Shield	9
1-8	Audio 4 Shield	BBI Shield	10
1-9	Audio 4+	Black	11
1-10	Audio 4-	Blue	12
2-1	Audio 5+	Black	13
2-2	Audio 5-	Red	14
2-3	Audio 5 Shield	BR Shield	15
2-3	Audio 6 Shield	BW Shield	16
2-4	Audio 6+	Black	17
2-5	Audio 6-	White	18
2-6	Audio 7+	Black	19
2-7	Audio 7-	Green	20
2-8	Audio 7 Shield	BG Shield	21
2-8	Audio 8 Shield	BBI Shield	22

PAB-100/400 Paging Amplifier Board
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2-9	Audio 8+	Black	23
2-10	Audio 8-	Blue	24

5. Talkback Amplifier Board

The Talkback Amplifier Board has the identical features and wiring as the standard Paging Amplifier Board. However, it is recommended that only one talkback loudspeaker be connected to each channel so that background noise from other loudspeakers on the circuit does not detract from the intended area of communication.

Talkback amplifier boards with talkback provide the same intercom function as station audio boards connected to loudspeakers with talkback kits. TAB's are used when more than one watt of audio power is required to be delivered to the loudspeaker.

5.1 Crosstalk in Talkback Amplifiers

In situations where one or more of the channels are used as a talkback amplifier while other amplifiers on the same TAB are used to provide high level paging outputs, or background music, crosstalk can be introduced into the talkback circuit through electromagnetic coupling. The crosstalk can make it difficult to hear the person speaking into the talkback amplifier. One solution is to use separate TAB's or PAB's for these purposes, isolating the two types of circuits.

6. System Planning Worksheet

The following page contains a blank system planning worksheet for the PAB-100 or PAB-400 Paging Amplifier Board. It contains a cross reference that includes the I/O board's mating connector, pin signal identification, field wiring cable conductor color, terminal block terminal point, and space to identify the field connection.

**PAB-100/400 Paging Amplifier Board
TAB-100/400 Talkback Amplifier Board**

Card Cage: _____

Card Slot: _____

Combicon Pin Number	Signal	PAB/TAB Cable Wire Colors	Terminal Block Pin Number	Speaker Circuit
1-1	Audio 1+	Black	1	
1-2	Audio 1-	Red	2	
1-3	Audio 1 & 2 Shield	BR Shield	3	
1-4	Audio 2+	Black	4	
1-5	Audio 2-	White	5	
1-3	Audio 1 & 2 Shield	BW Shield	6	
1-6	Audio 3+	Black	7	
1-7	Audio 3-	Green	8	
1-8	Audio 3 & 4 Shield	BG Shield	9	
1-9	Audio 4+	Black	10	
1-10	Audio 4-	Blue	11	
1-8	Audio 3 & 4 Shield	BBI Shield	12	
2-1	Audio 5+	Black	13	
2-2	Audio 5-	Red	14	
2-3	Audio 5 & 6 Shield	BR Shield	15	
2-4	Audio 6+	Black	16	
2-5	Audio 6-	White	17	
2-3	Audio 5 & 6 Shield	BW Shield	18	
2-6	Audio 7+	Black	19	
2-7	Audio 7-	Green	20	
2-8	Audio 7 & 8 Shield	BG Shield	21	
2-9	Audio 8+	Black	22	
2-10	Audio 8-	Blue	23	
2-8	Audio 7 & 8 Shield	BBI Shield	24	