Paging Adapter Amplifier Integration Guide

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➢ **Paging Amplifier Wiring Diagrams (continued)**

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Paging Adapter Hardware Interface

8301 Paging Adapter & Scheduler

8301
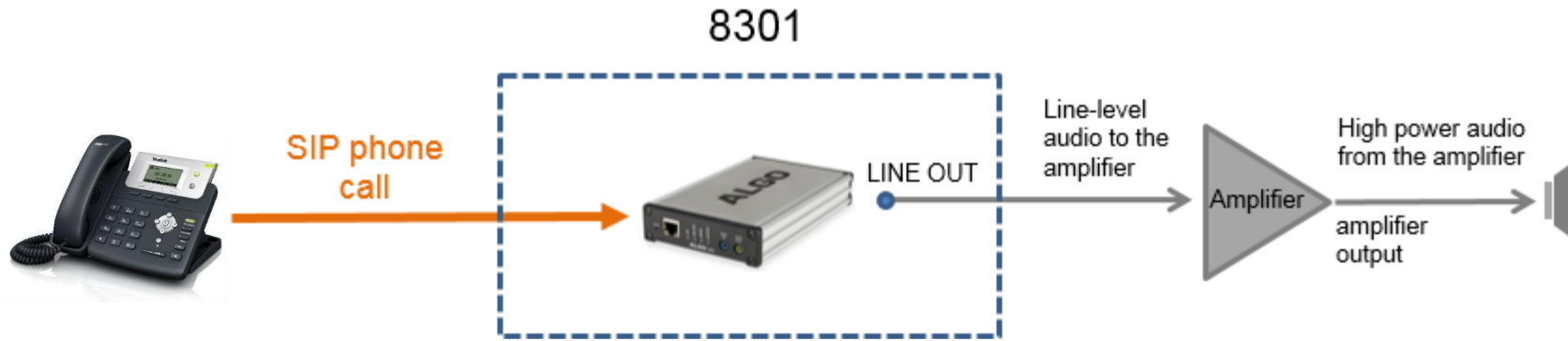
- SIP (50 Page ext., 10 Emergency Alert ext. & 10 Ring ext.)

- Multicast Send & Receive

- Scheduler for Automated Tones & Announcements

- 1GB Memory

Front View

Rear View

Music Input

8373 Zone Paging Adapter

ALGO

8373

SIP phone call

LINE OUT

Line-level audio to the amplifier

Amplifier

amplifier output

AMP IN

High power audio from the amplifier

CH 1

CH 2

CH 3

Zone selection controlled by SIP extension or DTMF.
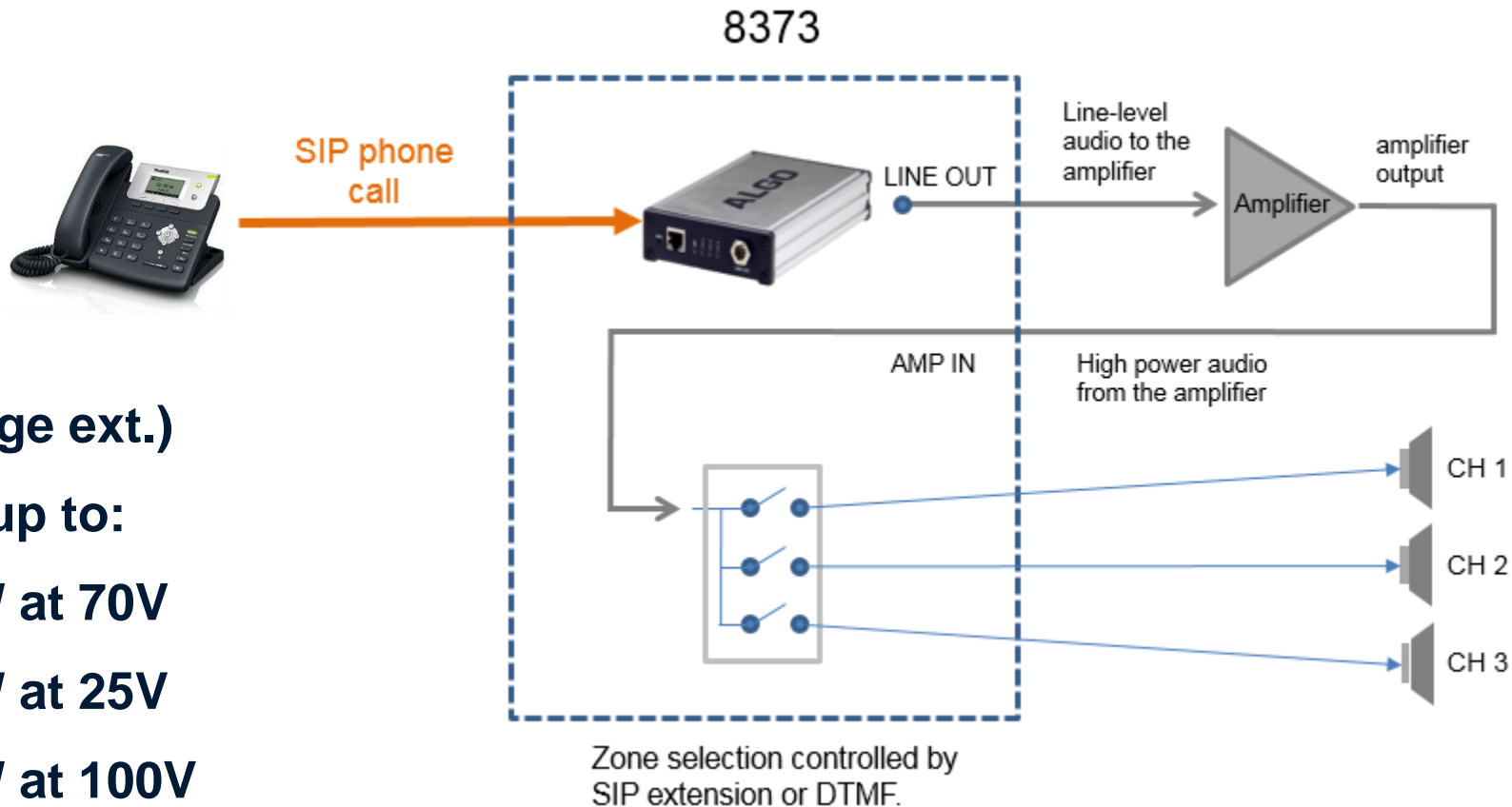
- SIP (50 Page ext.)
- Switches up to:
    - 500W at 70V
    - 180W at 25V
    - 720W at 100V
- Multicast Send & Receive

8373 Zone Paging Adapter

ALGO

Front View
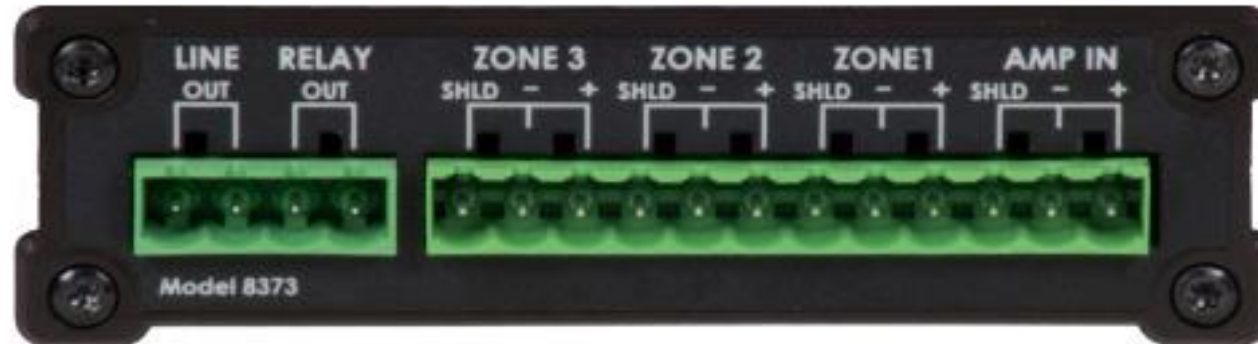
Rear View

Hybrid IP & Analog Infrastructure Integration

ALGO

SIP Call

Simultaneous Line Level Output to Amplifier

Analog Amplifier & Speakers

Simultaneous Multicast To Speakers, Strobes & Phones

Paging Amplifier Wiring Diagrams
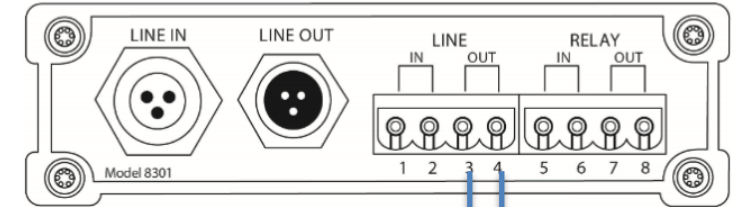
Recommended: use an aux cable and strip the leads on one end. Connect the positive and negative (usually red and black) terminals to the Line Out.

To connect the other end to the amplifier input Mic/Line 2, use a 3.5 mm to 6.3 mm adapter.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

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Recommended: use an aux cable and strip the leads on one end. Connect the positive and negative (usually red and black) terminals to the Line Out.

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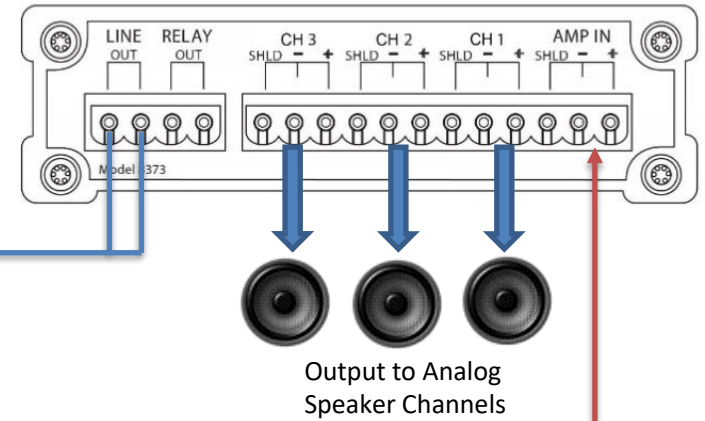
Output from Amplifier (25/70/100V)

Output to Analog Speaker Channels

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

8301 Installation Example with AT&T/Lucent PagePal
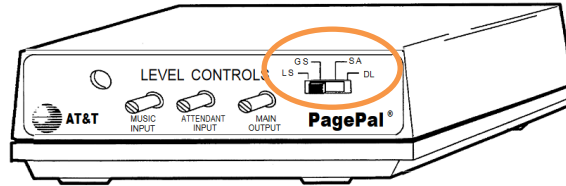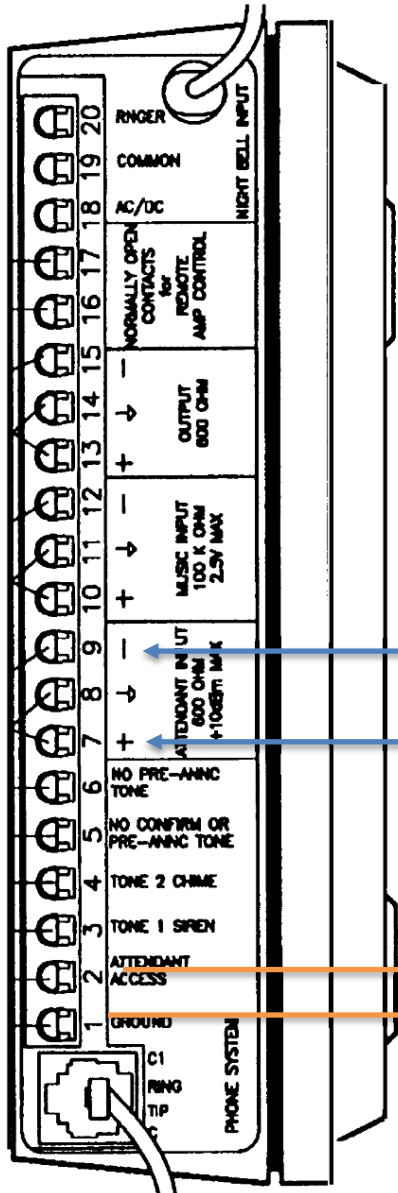
Set the PagePal to DL (Dry Loop) mode using the switch in the front

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
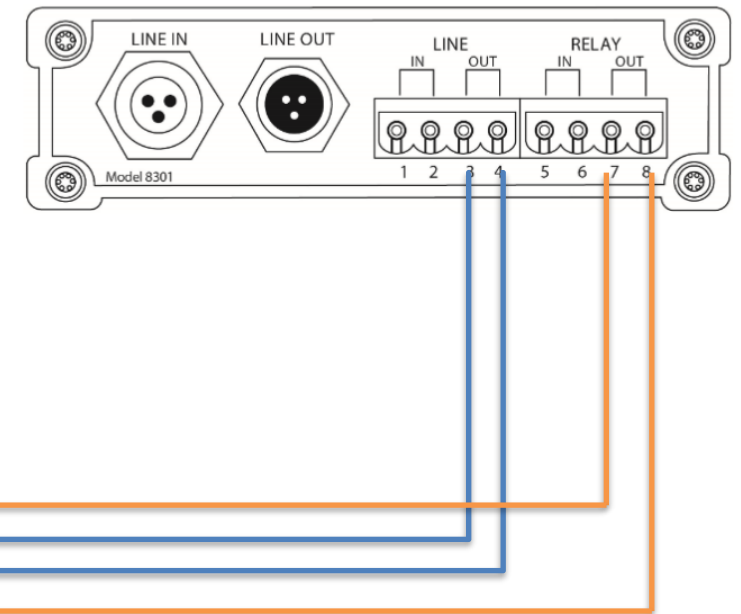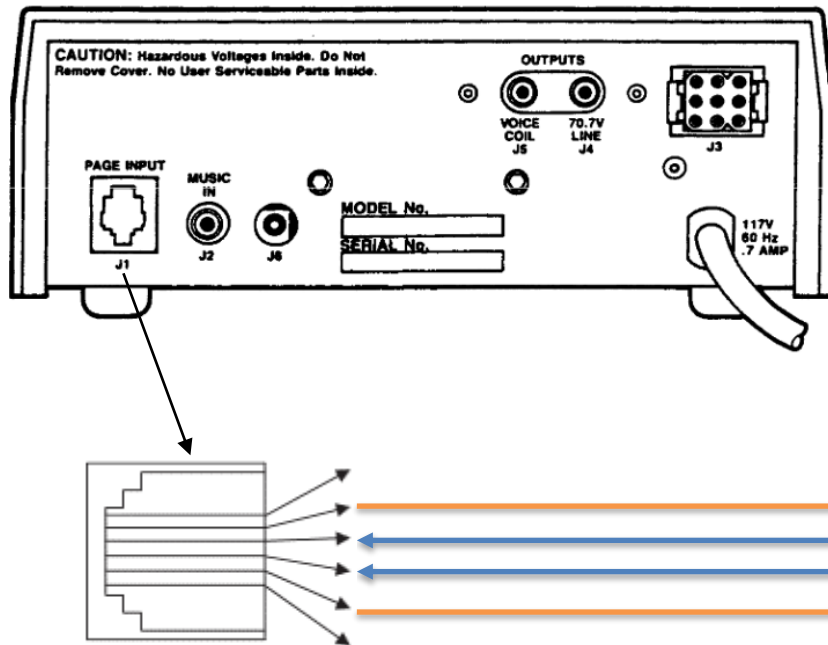
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
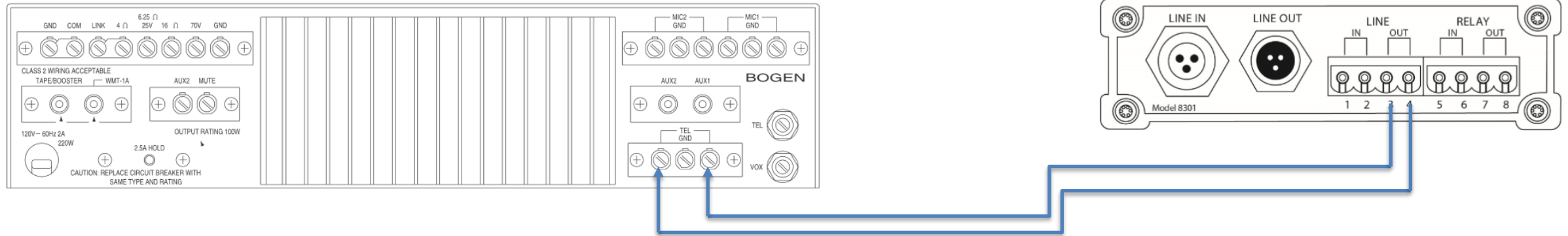
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

8301 Installation Example with Bogen GS35/GS60/GS100 & GS150/GS250
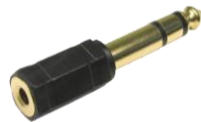

Set the switch to the "TEL" position

Ensure JP1 Phantom Power Jumper is in the OFF position

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

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TRUNK/PAGE PORT

6 - Not used
5 - Contact Closure
4 - Dry audio (T)
3 - Dry audio (R)
2 - Contact Closure
1 - Not used

Before connecting, power off PCM2000 system. Set the dip switch as demonstrated above (CC switch down and P/P switch middle).
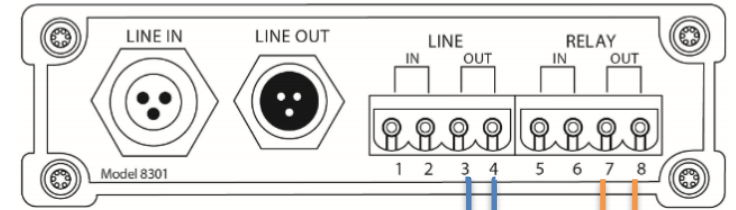
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

To play DTMF tones and control the zones, make sure to enable Generate In-Band DTMF Tones (Advanced Settings -> Advanced Audio).

8301 Installation Example with Bogen TPU-35/60/100/250
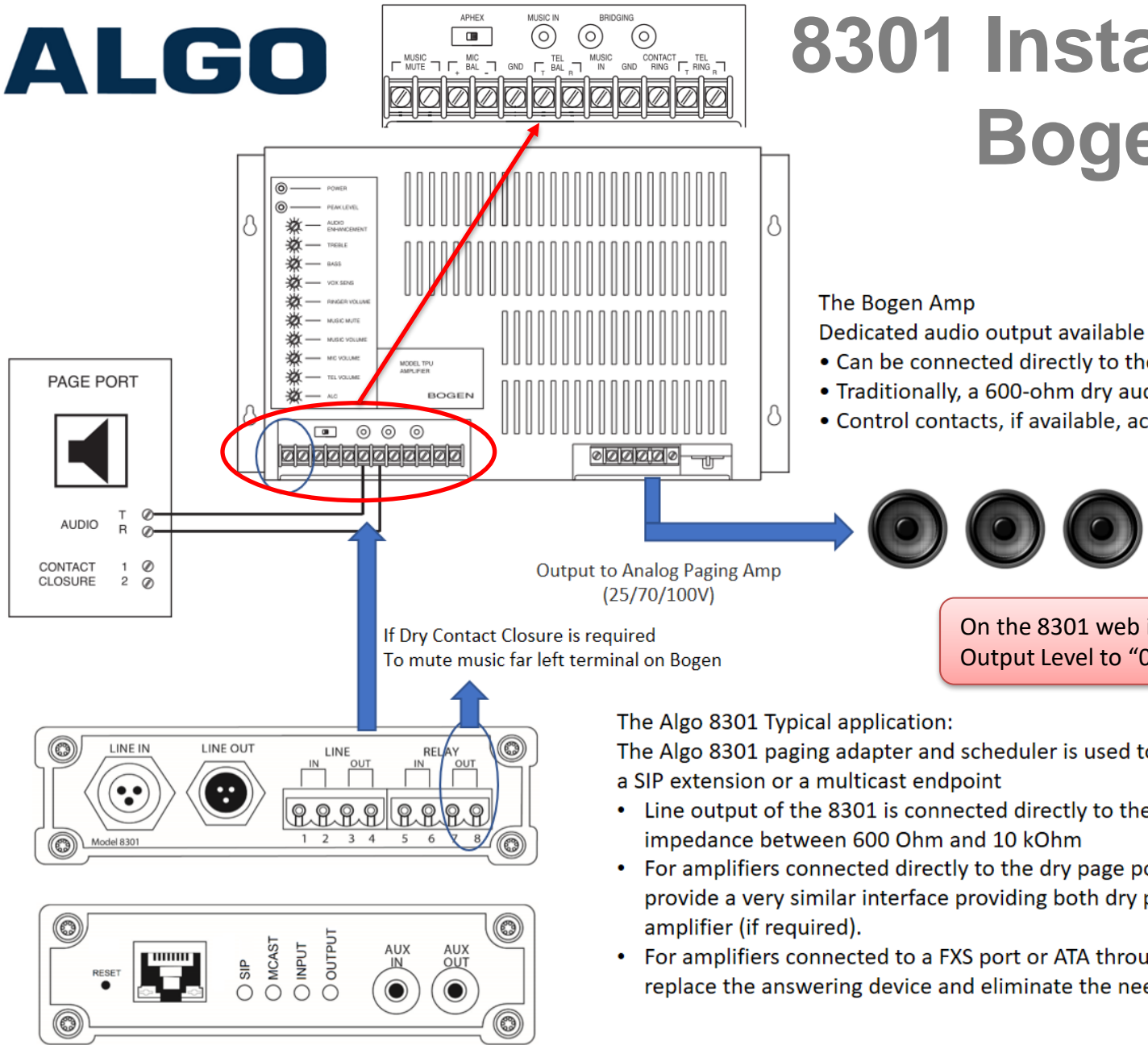
The Bogen Amp
Dedicated audio output available standard on most telephone systems
- Can be connected directly to the input of most amplifiers
- Traditionally, a 600-ohm dry audio signal and a normally open control contact closure
- Control contacts, if available, activate during a page and typically control the muting of background music

Output to Analog Paging Amp
(25/70/100V)

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
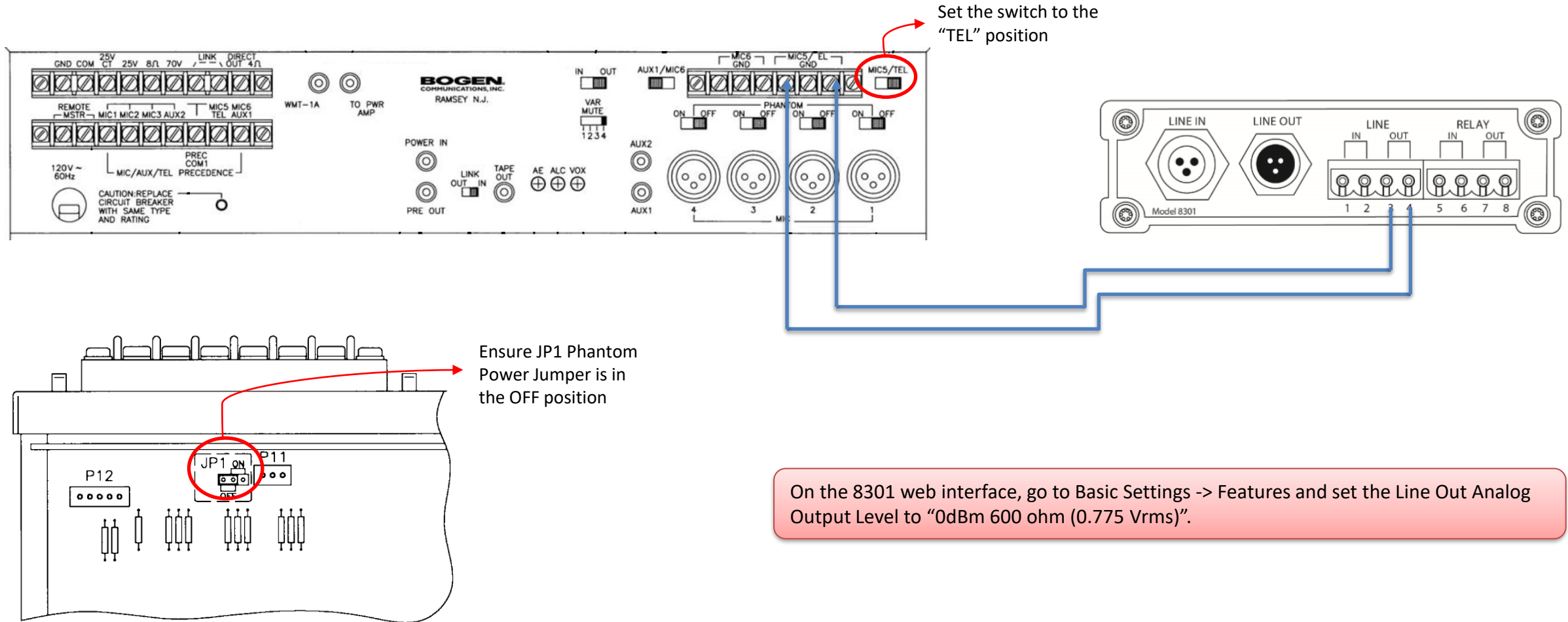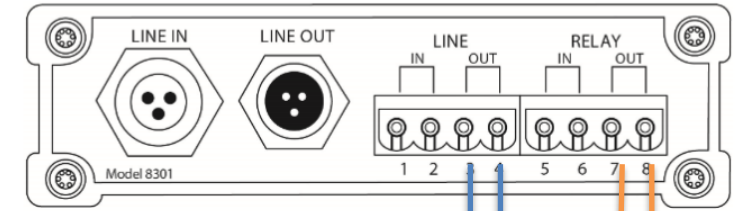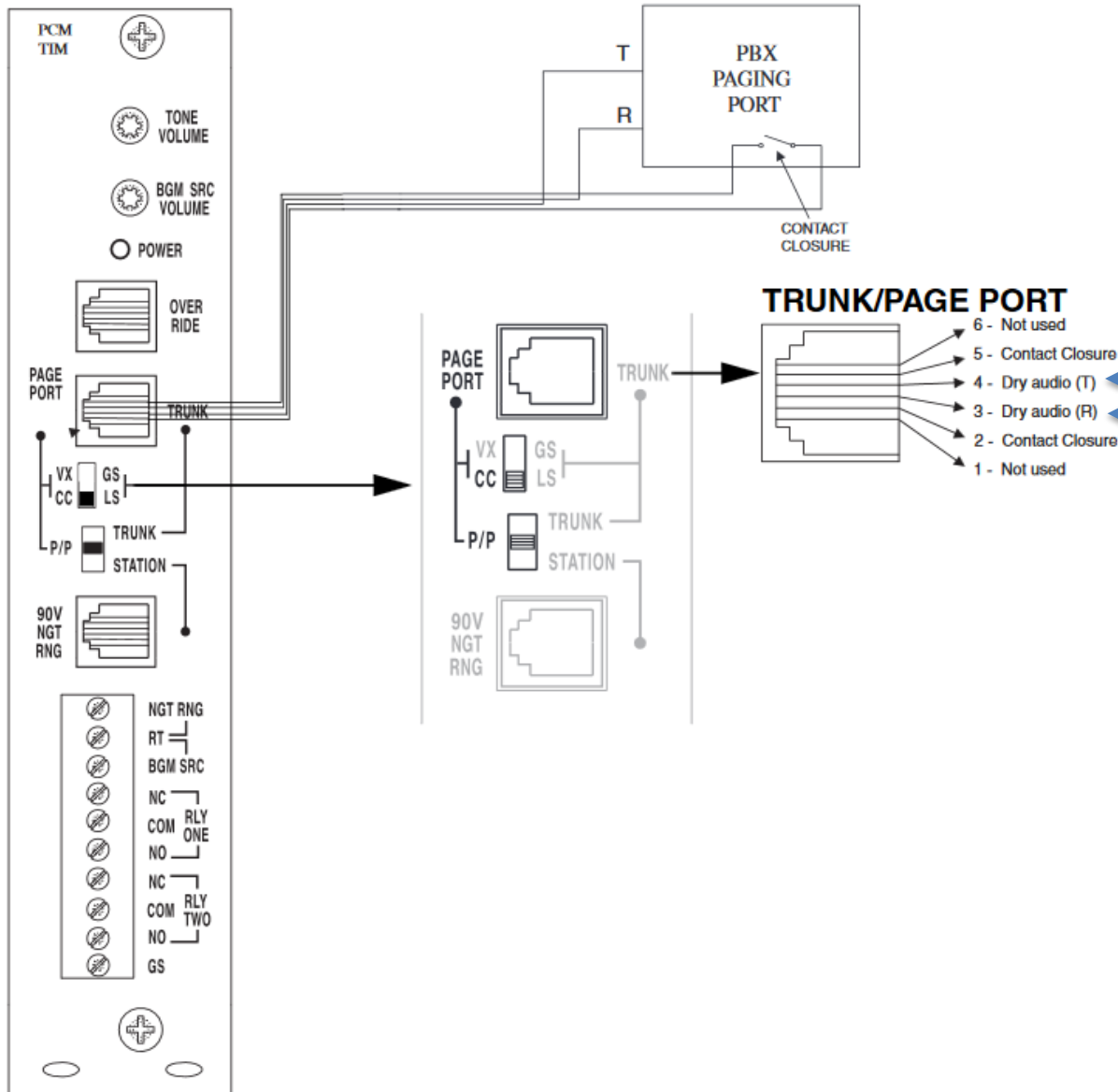
If Dry Contact Closure is required
To mute music far left terminal on Bogen

The Algo 8301 Typical application:
The Algo 8301 paging adapter and scheduler is used to connect an existing amplifier to UC environment as a SIP extension or a multicast endpoint
- Line output of the 8301 is connected directly to the dry audio input of the amplifier with input impedance between 600 Ohm and 10 kOhm
- For amplifiers connected directly to the dry page port of an existing telephone system, the 8301 will provide a very similar interface providing both dry page audio and dry contact closure to activate the amplifier (if required).
- For amplifiers connected to a FXS port or ATA through a "telephone answering device" the 8301 will replace the answering device and eliminate the need for a FXS port or ATA.

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8373 Installation Example with Bogen TPU-35/60/100/250

Output to Analog Paging Amp (25/70/100V)

If Dry Contact Closure is required To mute music far left terminal on Bogen

Output to Analog Speaker zones

The 8373 is designed to provide a Line Out for audio to a traditional amplifier.

Loop the power of the amplifier into the 8373 to switch up to 500W (for 70V output) into 1-3 audio channels. At 25V the 8373 can switch up to 180W and 720W at 100V.

The speaker runs will be connected to the channel outputs on the 8373.

On the 8373 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

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Set the horizontal switch to "CONT" and the vertical to "Page Port".

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

ALGO
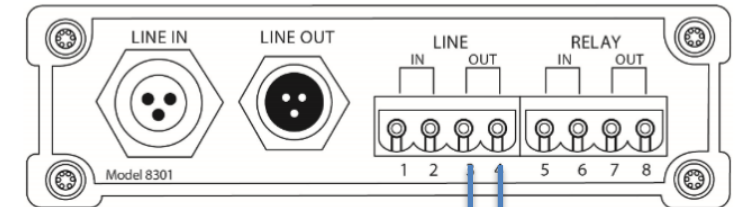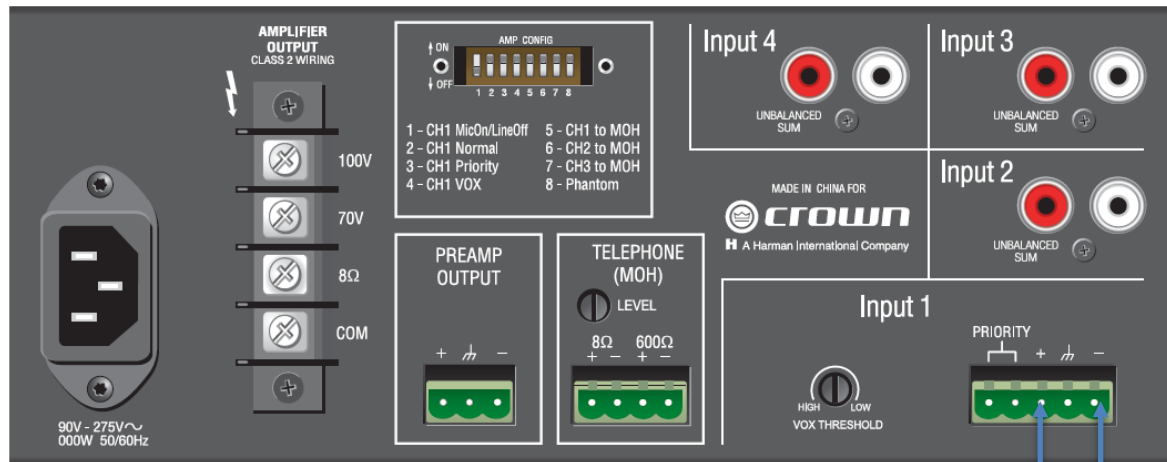
Set switch 1 to "Line" position.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBv 10k (1.0 Vrms)".
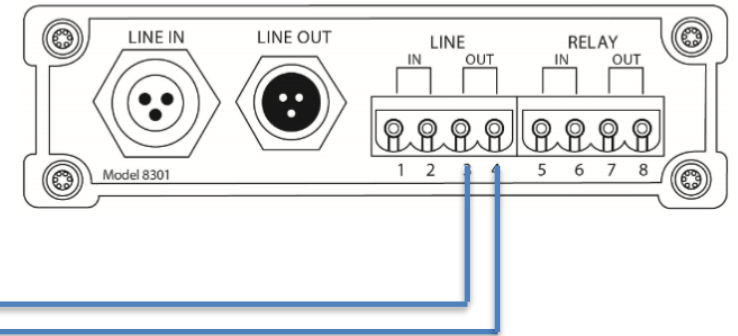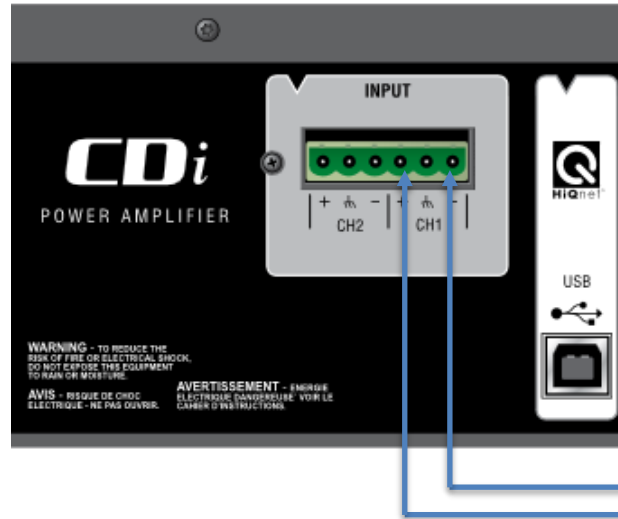
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "+4dBu 10k (1.23 Vrms)".

Note: Channel 1 or 2 may be used.

ALGO

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
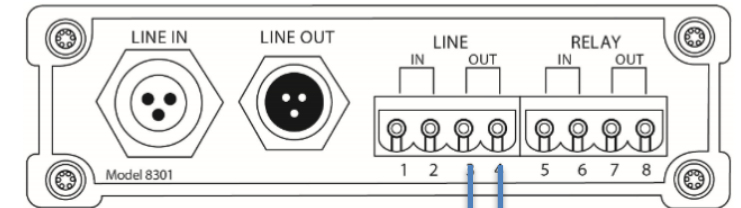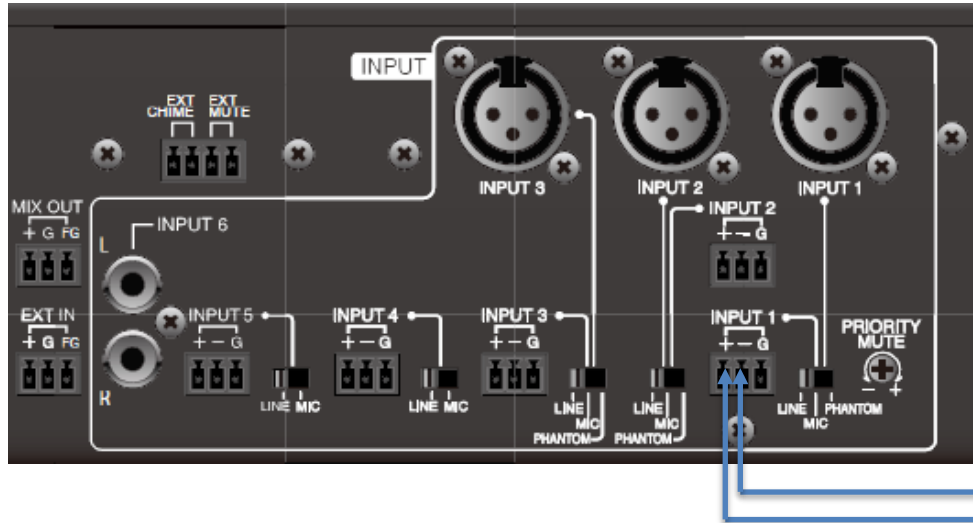
Connect the Line Out pair on the 8301 to the + and – terminals on one of the Inter-M inputs. Move the input selection switch to the "Line" position.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

Set the highlighted switch to the TEL position

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
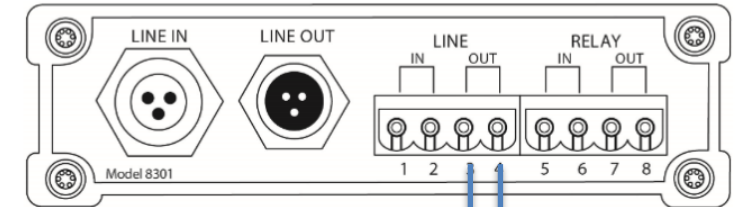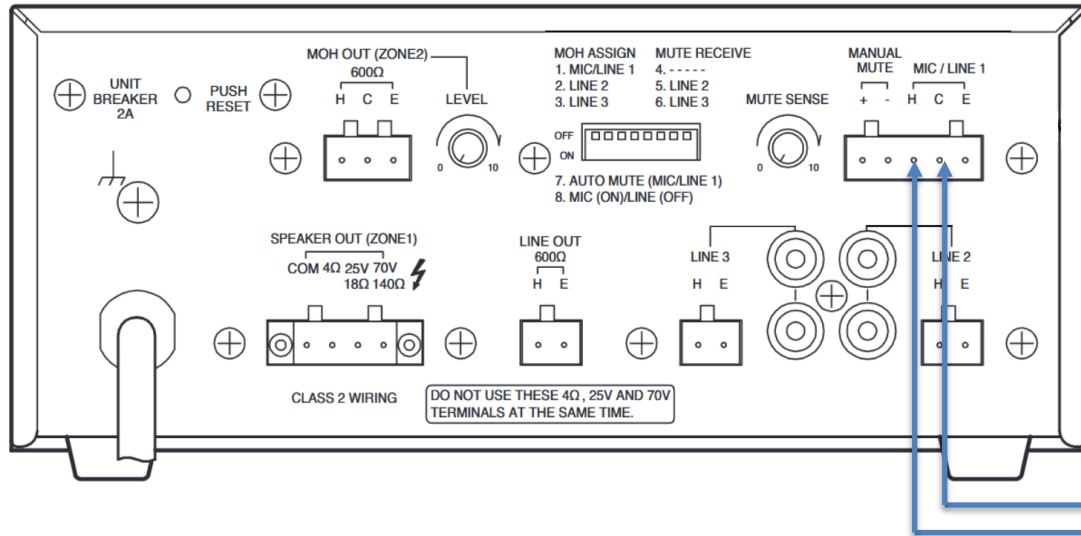
Set DIP switch 8 to the OFF position and be sure to turn off the power before performing this step.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".

The impedance is set from factory to 10 kΩ. To switch to 600 Ω, change the position of the unit's internal jumper switch JP204 as per diagram below.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

600 Ω   10 kΩ

Jumper switch JP204

T203

T202   T201

Preamplifier board

Set the DIP switches as per below:

Function Switches A (upper terminal)
- *Switch 2 – Off*
- *Switch 4 – On*

Function Switches B (lower terminal)
- *DIP Switch 2 – On*

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-20dBm 600 ohm (0.077 Vrms)".
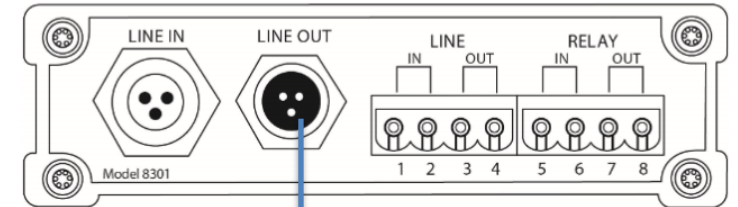
Set the Phantom switch above the input to the off position.

Recommended: Algo 2504 Output XLR-Mini Female to XLR Male

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".
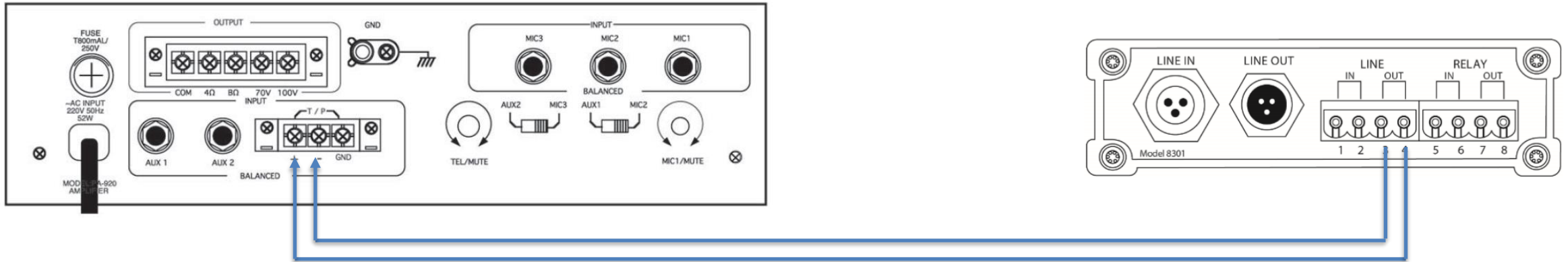
Set the Battery Feed switch off before connecting the 8301
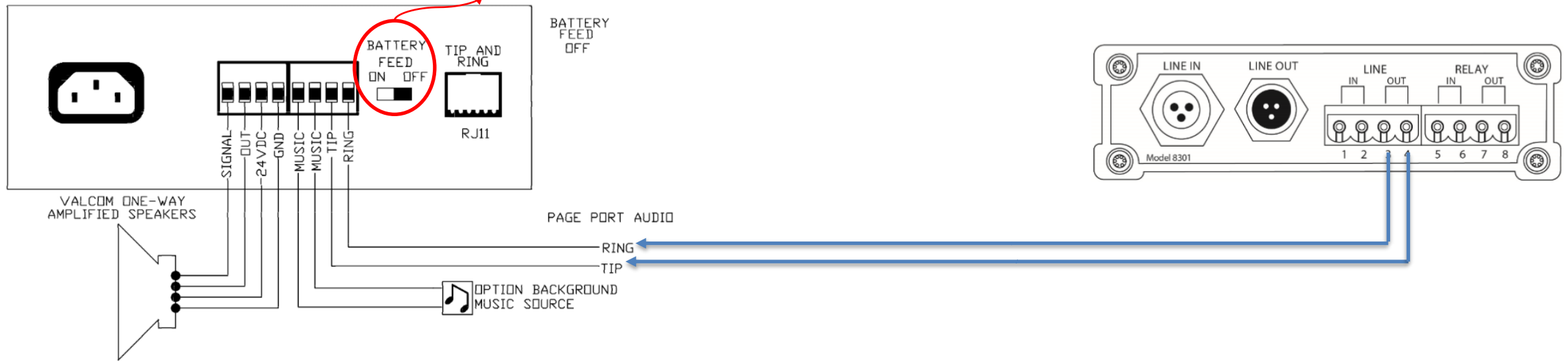
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".

ALGO

SW1 Off for Page Port Access

The 8301 Line Out (terminal 3 and 4) connects to either the Tip and J3) using an RJ11 modular connector or the Page T and Page R inputs on the Valcom V-2001A via a 2-wire connection to the terminal strip.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".
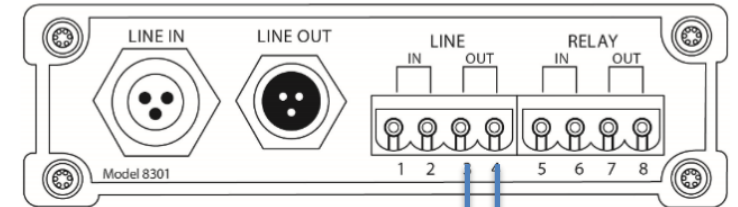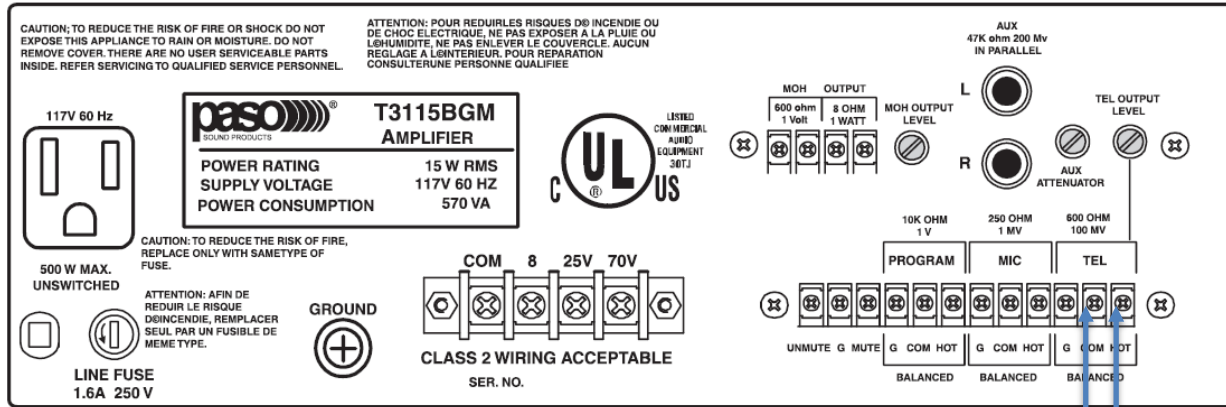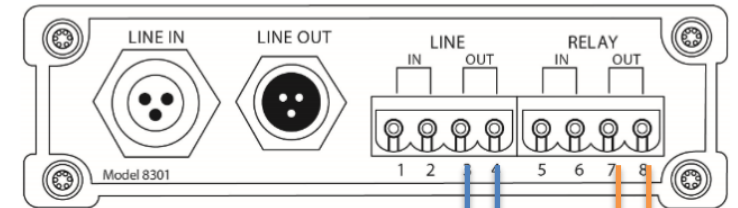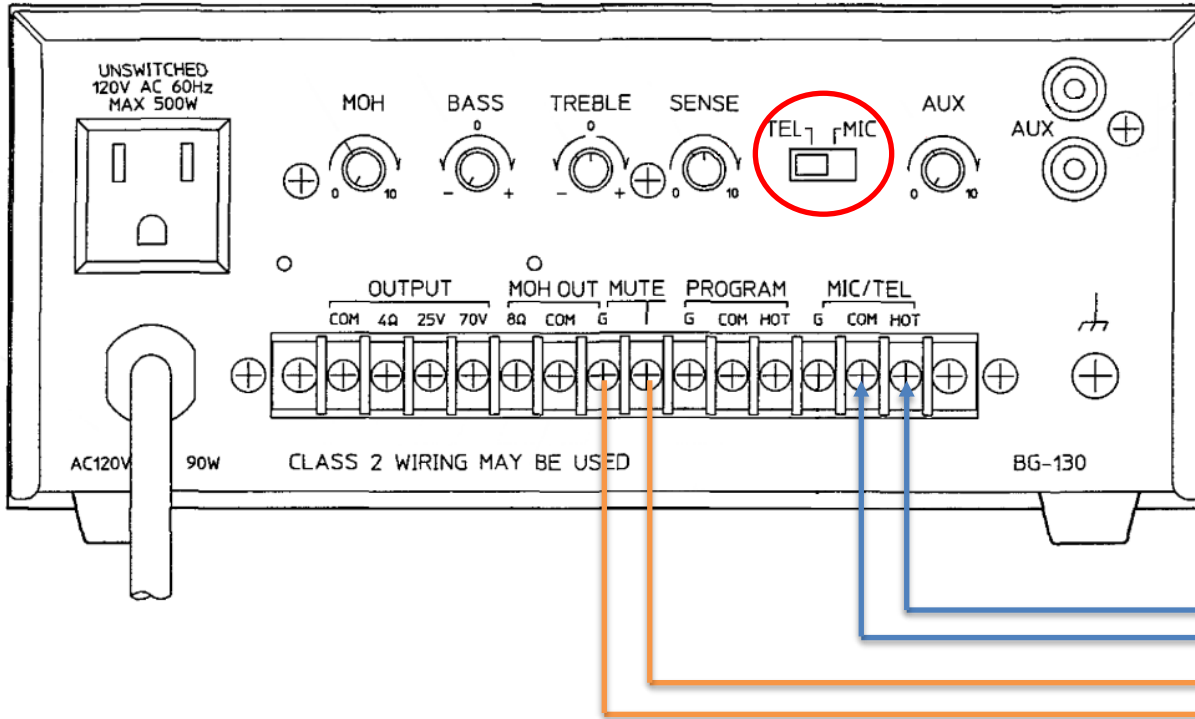
8301 Installation Example with Valcom V-2003a

ALGO

System Tip	26	WH/BL
System Ring	1	BL/WH
Page Port Access OC	27	WH/O
Page Port Access OC	2	O/WH
Music Input	28	WH/GR
Music Input	3	GR/W
Not Used	29	W/BR
Inhibit	4	BR/W
Override Tip	30	W/S
Override Ring	5	S/W
Zone 1-Low Level Output Tip	31	R/BL
Zone 1-Low Level Output Ring	6	BL/R
-24 Volt Out	32	R/O
GND Out	7	O/R
Zone 2-Low Level Output Tip	33	R/G
Zone 2-Low Level Output Ring	8	G/R
-24 Volt Out	34	R/BR
GND Out	9	BR/R
Zone 3-Low Level Output Tip	35	R/S
Zone 3-Low Level Output Ring	10	S/R
-24 Volt Out	36	BK/BL
GND Out	11	BL/BK
Not Used	37	BK/O
Not Used	12	O/BK
Zone 1-Handsfree Output Tip	38	BK/G
Zone 1-Handsfree Output Ring	13	G/BK
Zone 2-Handsfree Output Tip	39	BK/BR
Zone 2-Handsfree Output Ring	14	BR/BK
Zone 3-Handsfree Output Tip	40	BK/S
Zone 3-Handsfree Output Ring	15	S/BK
Not Used	41	Y/BL
Not Used	16	BL/Y
Not Used	42	Y/O
Not Used	17	O/Y
Not Used	43	Y/G
Not Used	18	G/Y
Not Used	44	Y/BR
Not Used	19	BR/Y
Not Used	45	Y/S
Not Used	20	S/Y
Not Used	46	V/BL
Not Used	21	BL/S
Not Used	47	V/O
Not Used	22	O/V
Clock Closure	48	V/G
Clock Closure	23	G/V
UNA Closure	49	V/BR
UNA Closure	24	BR/V
UNA Ringing	50	V/S
UNA Ringing	25	S/V

Used only with the V-2003AHF

LINE IN   LINE OUT   LINE (IN OUT)   RELAY (IN OUT)
Model 8301
1 2 3 4   5 6 7 8

To Loop or Ground Start Trunk Override

TIP / RING / -24 VDC / GND — VALCOM AMPLIFIED SPEAKER

TIP / RING / -24 VDC / GND — VALCOM AMPLIFIED SPEAKER

TIP / RING / -24 VDC / GND — Appropriate Telephone System Ground (Ground strap required for good start access only)

* OPTIONAL LOCAL POWER SUPPLY − + −24 VDC

45 Ohm Talkback Speakers (V-2003AHF only)

Time Clock Dry Contact Closure

Telephone System Common Audible Dry Contact Closure

90 VAC Ringing from an assigned Station Port

On the Valcom V2003a switch SW3, set 4, 7 and 10 to the off position (up position). Also set SW2 to off position.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".
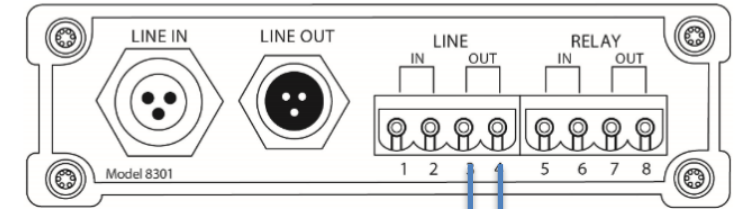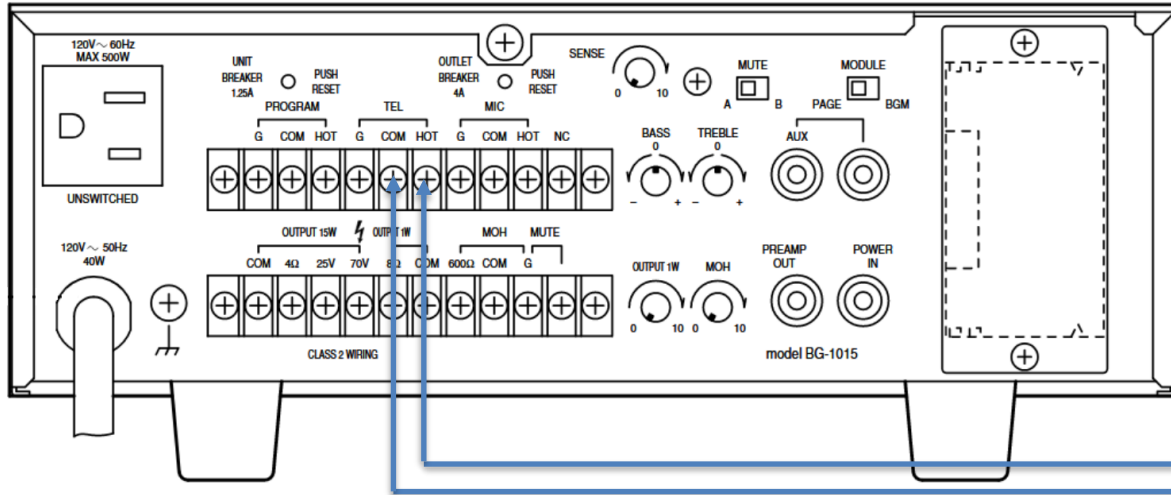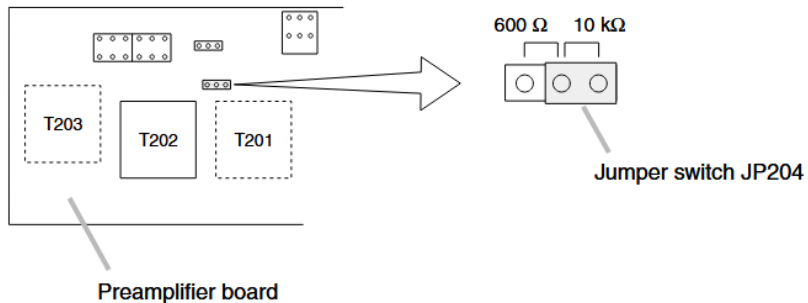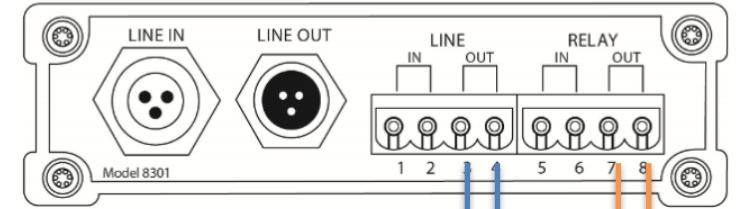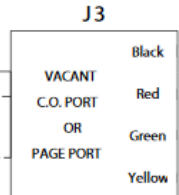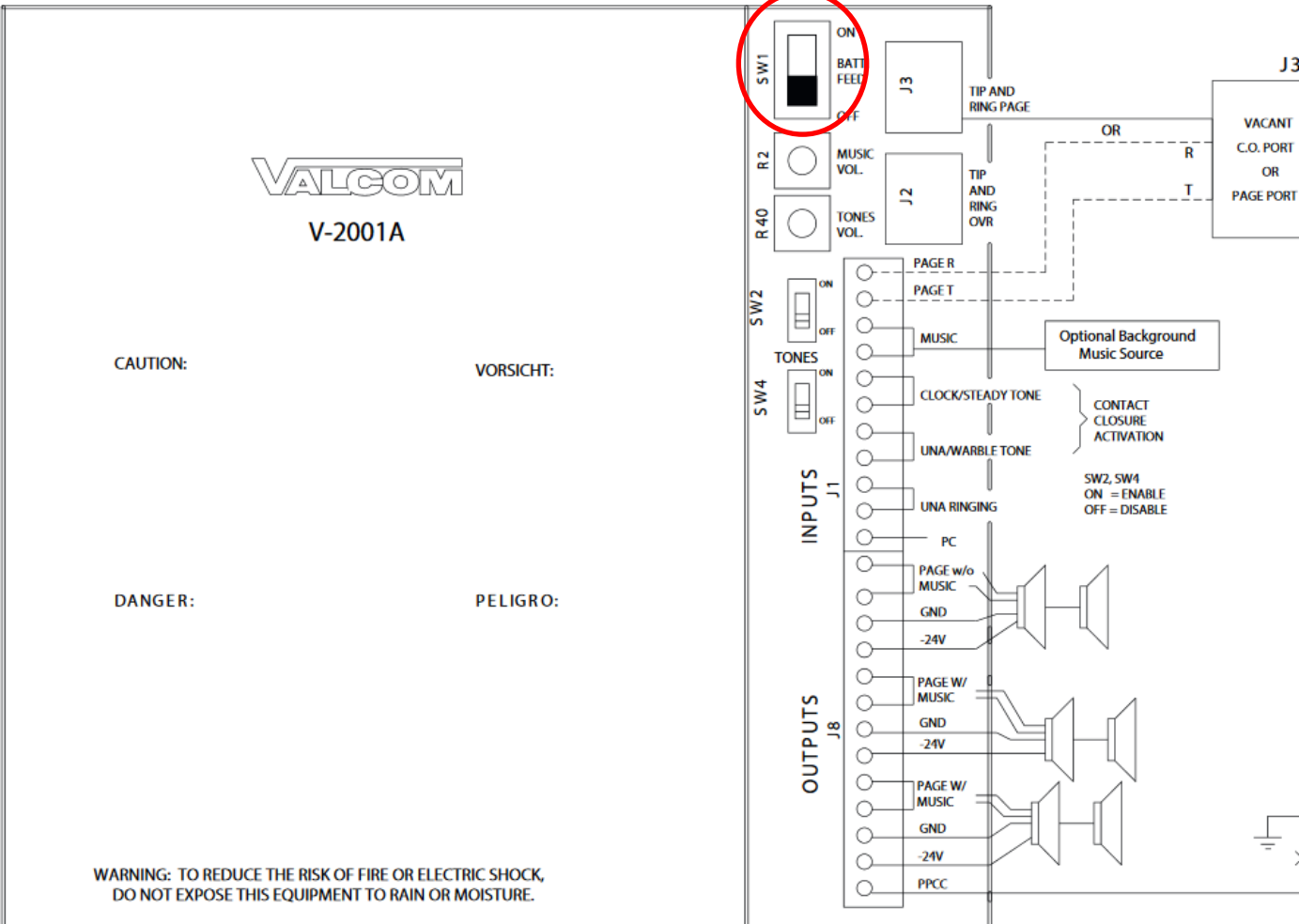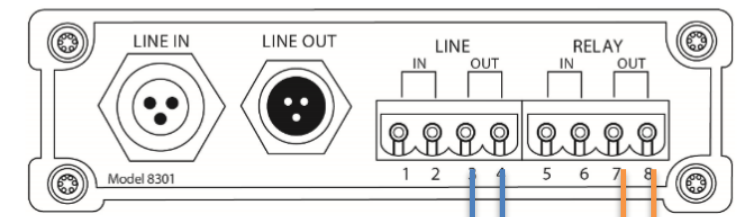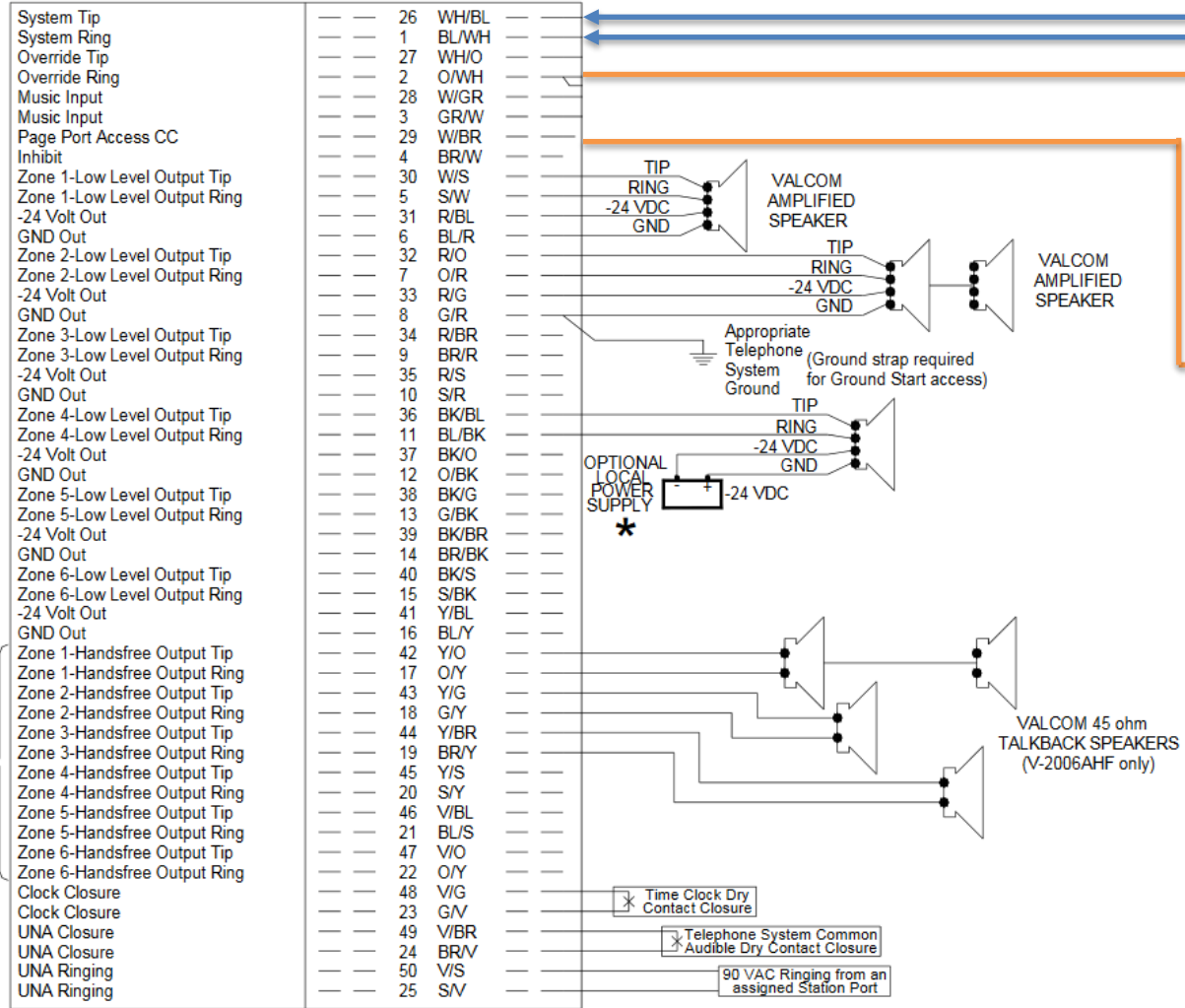
To play DTMF tones and control the zones, make sure to enable Generate In-Band DTMF Tones (Advanced Settings -> Advanced Audio).

System Tip	26	WH/BL	
System Ring	1	BL/WH	
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Override Ring	2	O/WH	
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Inhibit	4	BR/W	
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Zone 1-Low Level Output Ring	5	S/W	
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GND Out	6	BL/R	
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Zone 2-Low Level Output Ring	7	O/R	
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GND Out	8	G/R	
Zone 3-Low Level Output Tip	34	R/BR	
Zone 3-Low Level Output Ring	9	BR/R	
-24 Volt Out	35	R/S	
GND Out	10	S/R	
Zone 4-Low Level Output Tip	36	BK/BL	
Zone 4-Low Level Output Ring	11	BL/BK	
-24 Volt Out	37	BK/O	
GND Out	12	O/BK	
Zone 5-Low Level Output Tip	38	BK/G	
Zone 5-Low Level Output Ring	13	G/BK	
-24 Volt Out	39	BK/BR	
GND Out	14	BR/BK	
Zone 6-Low Level Output Tip	40	BK/S	
Zone 6-Low Level Output Ring	15	S/BK	
-24 Volt Out	41	Y/BL	
GND Out	16	BL/Y	
Zone 1-Handsfree Output Tip	42	Y/O	
Zone 1-Handsfree Output Ring	17	O/Y	
Zone 2-Handsfree Output Tip	43	Y/G	
Zone 2-Handsfree Output Ring	18	G/Y	
Zone 3-Handsfree Output Tip	44	Y/BR	
Zone 3-Handsfree Output Ring	19	BR/Y	
Zone 4-Handsfree Output Tip	45	Y/S	
Zone 4-Handsfree Output Ring	20	S/Y	
Zone 5-Handsfree Output Tip	46	V/BL	
Zone 5-Handsfree Output Ring	21	BL/S	
Zone 6-Handsfree Output Tip	47	V/O	
Zone 6-Handsfree Output Ring	22	O/Y	
Clock Closure	48	V/G	
Clock Closure	23	G/V	
UNA Closure	49	V/BR	
UNA Closure	24	BR/V	
UNA Ringing	50	V/S	
UNA Ringing	25	S/V	

Used only with the V-2006AHF

TIP
RING
-24 VDC
GND
VALCOM AMPLIFIED SPEAKER

TIP
RING
-24 VDC
GND
VALCOM AMPLIFIED SPEAKER

Appropriate Telephone System Ground (Ground strap required for Ground Start access)

TIP
RING
-24 VDC
GND

OPTIONAL LOCAL POWER SUPPLY
*
-24 VDC

VALCOM 45 ohm TALKBACK SPEAKERS (V-2006AHF only)

Time Clock Dry Contact Closure

Telephone System Common Audible Dry Contact Closure

90 VAC Ringing from an assigned Station Port

LINE IN   LINE OUT   LINE   RELAY
                        IN OUT   IN OUT
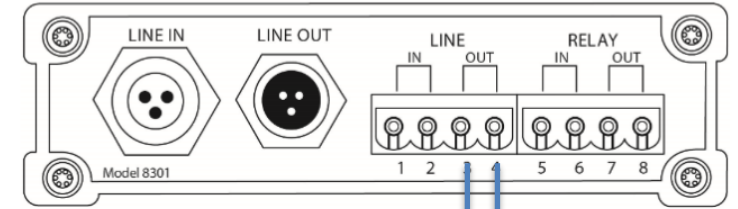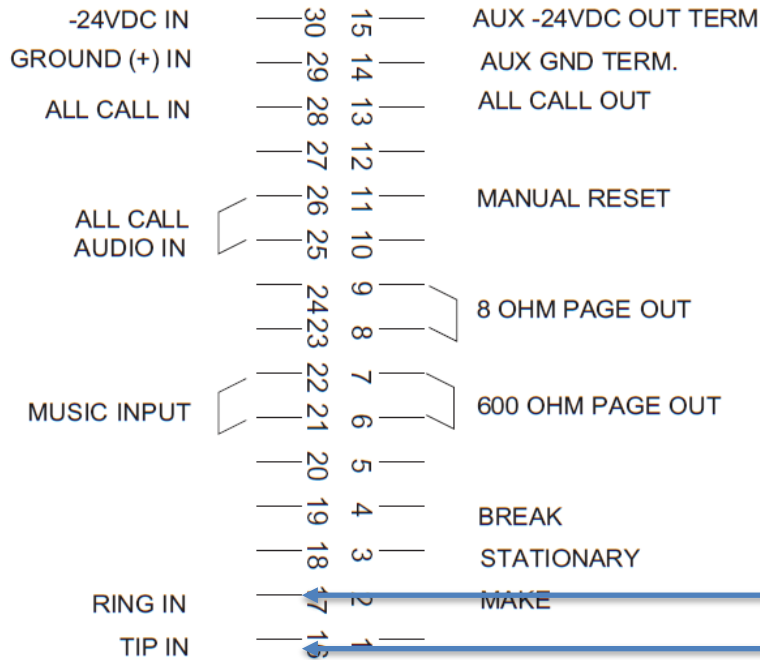Model 8301   1 2 3 4   5 6 7 8

Set the Battery Feed switch to the off position for Page Port access on the V2006a.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)".

To play DTMF tones and control the zones, make sure to enable Generate In-Band DTMF Tones (Advanced Settings -> Advanced Audio).

ALGO

-24VDC IN
GROUND (+) IN
ALL CALL IN

AUX -24VDC OUT TERM
AUX GND TERM.
ALL CALL OUT

ALL CALL
AUDIO IN

MANUAL RESET

8 OHM PAGE OUT

MUSIC INPUT

600 OHM PAGE OUT

BREAK
STATIONARY
MAKE

RING IN
TIP IN

LINE IN   LINE OUT   LINE   RELAY
   IN   OUT   IN   OUT

Model 8301   1 2 3 4   5 6 7 8

Ensure that only DIP Switches 1 and 8 are ON. If the device is not working try turning DIP Switch 1 OFF.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-20dBm 600 ohm (0.077 Vrms)".

SW	OFF	ON
1	Audio Sense Enable	Time Out Enable
2	Not 1 Sec.	1 Second
3	Not 64 Sec.	64 Seconds
4	Not 32 Sec.	32 Seconds
5	Not 16 Sec.	16 Seconds
6	Not 8 Sec.	8 Seconds
7	Not 4 Sec.	4 Seconds
8	Loop Detect Disable	Loop Detect Enable

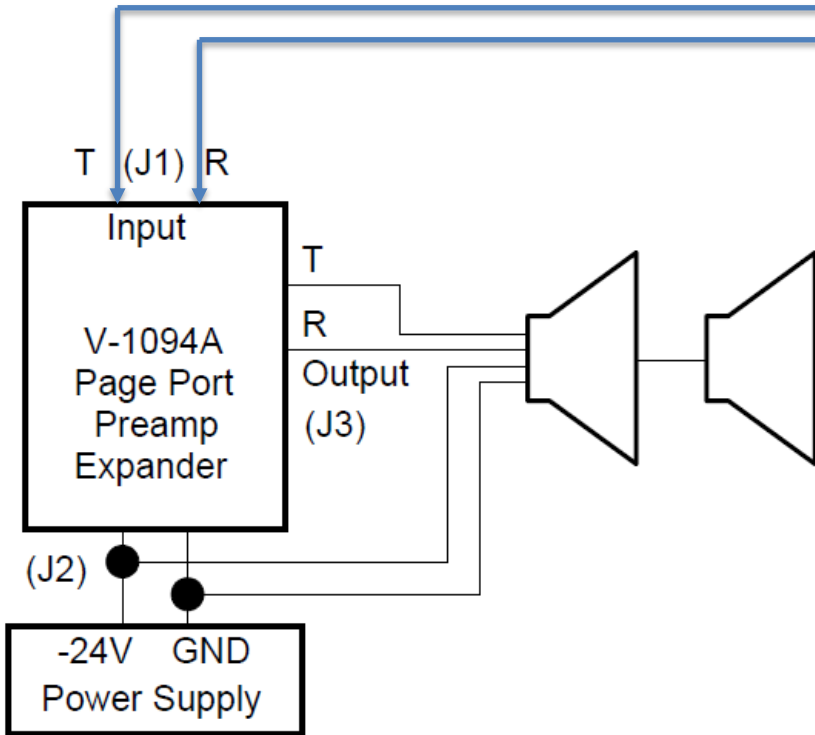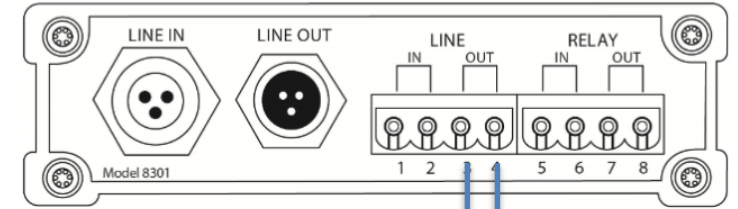   1 2 3 4   5 6 7 8
ON
OFF

8301 Installation Example with Valcom V-9941A
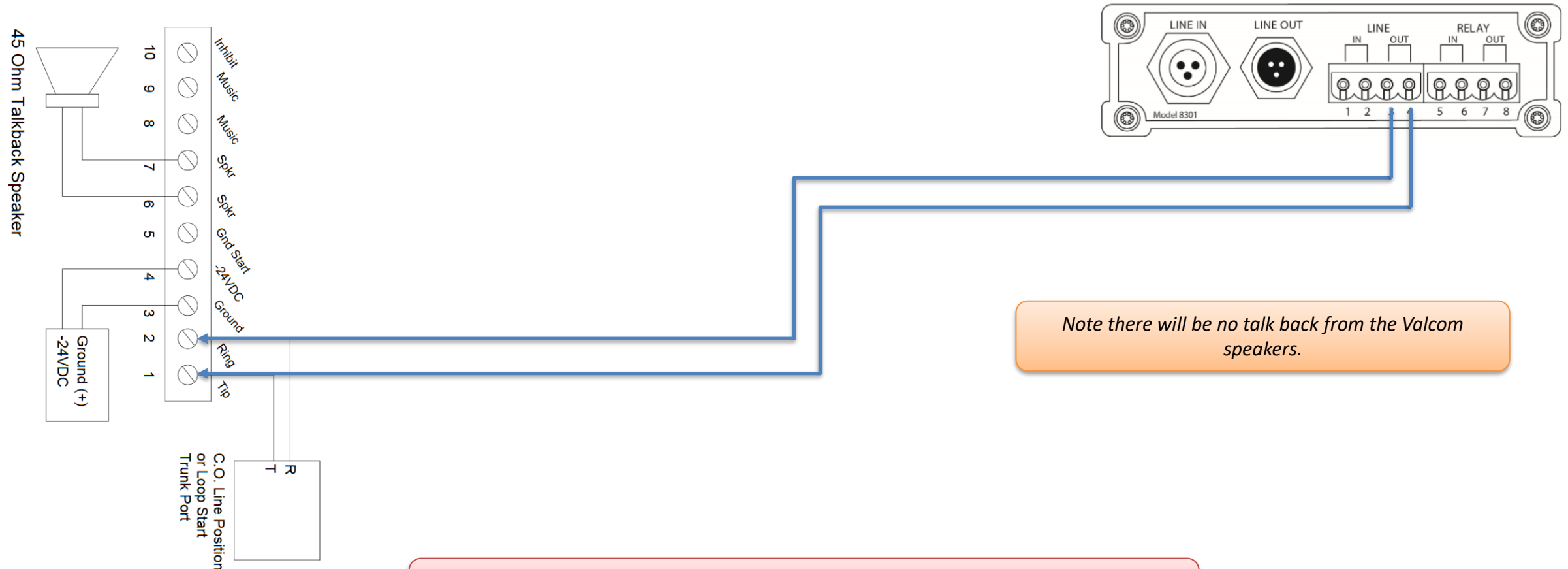
Note there will be no talk back from the Valcom speakers.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
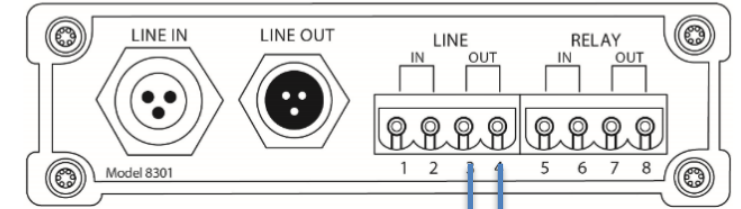
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

8301 Installation Example with Valcom V-2924A

Block P7 - System Inputs

26	W/BL	Tip - Attendant Tel	Group 1
1	BL/W	Ring - Attendant Tel	
27	W/O	Common Audible C.C.	
2	O/W	Common Audible C.C.	
28	W/GR	BGM Input	
3	GR/W	BGM Input	
29	W/BR	Riot Mode	
4	BR/W	Riot Mode	
30	W/S	External Tone - Tip	
5	S/W	External Tone - Ring	
31	R/BL	Clock Activate	
6	BL/R	Clock Activate	
32	R/O	Clock Enable C. C.	Group 2
7	O/R	Clock Enable C. C.	
33	R/G	Emergency Activate	
8	G/R	Emergency Activate	
34	R/BR	Emergency Enable C. C.	
9	BR/R	Emergency Enable C. C.	
35	R/S	Override Page Port - Tip	
10	S/R	Override Page Port - Ring	
36	BK/BL	Dry Priority Activate	
11	BL/BK	Dry Priority Activate	
37	BK/O	Inhibit	
12	O/BK	Inhibit GND	

Set the Battery Feed switch (SW4) to off for Page Port access.

Note there will be no talkback via the Valcom V-2924A.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)"..
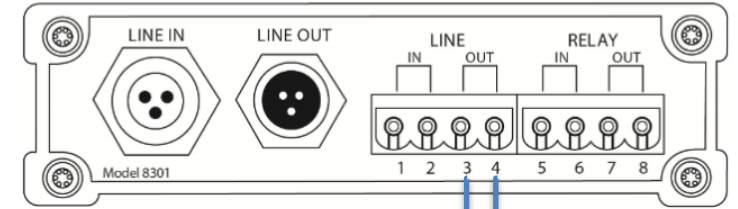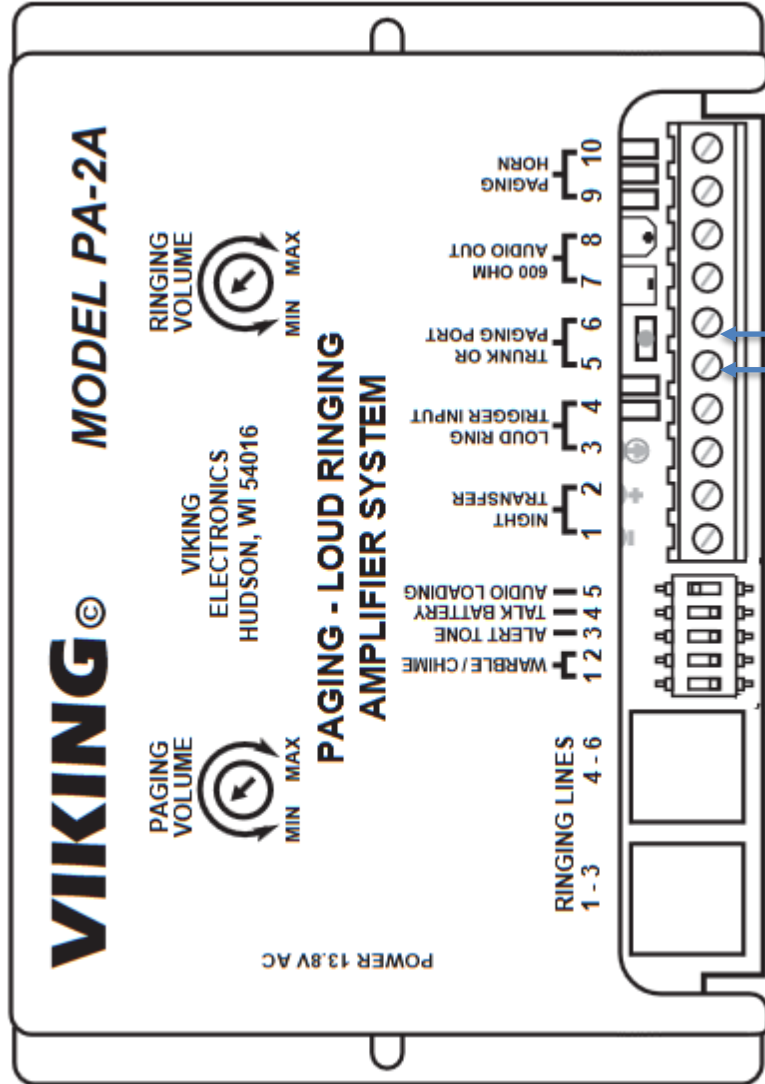
To play DTMF tones and control the zones, make sure to enable Generate In-Band DTMF Tones (Advanced Settings -> Advanced Audio).

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "-10dBm 600 ohm (0.245 Vrms)"..
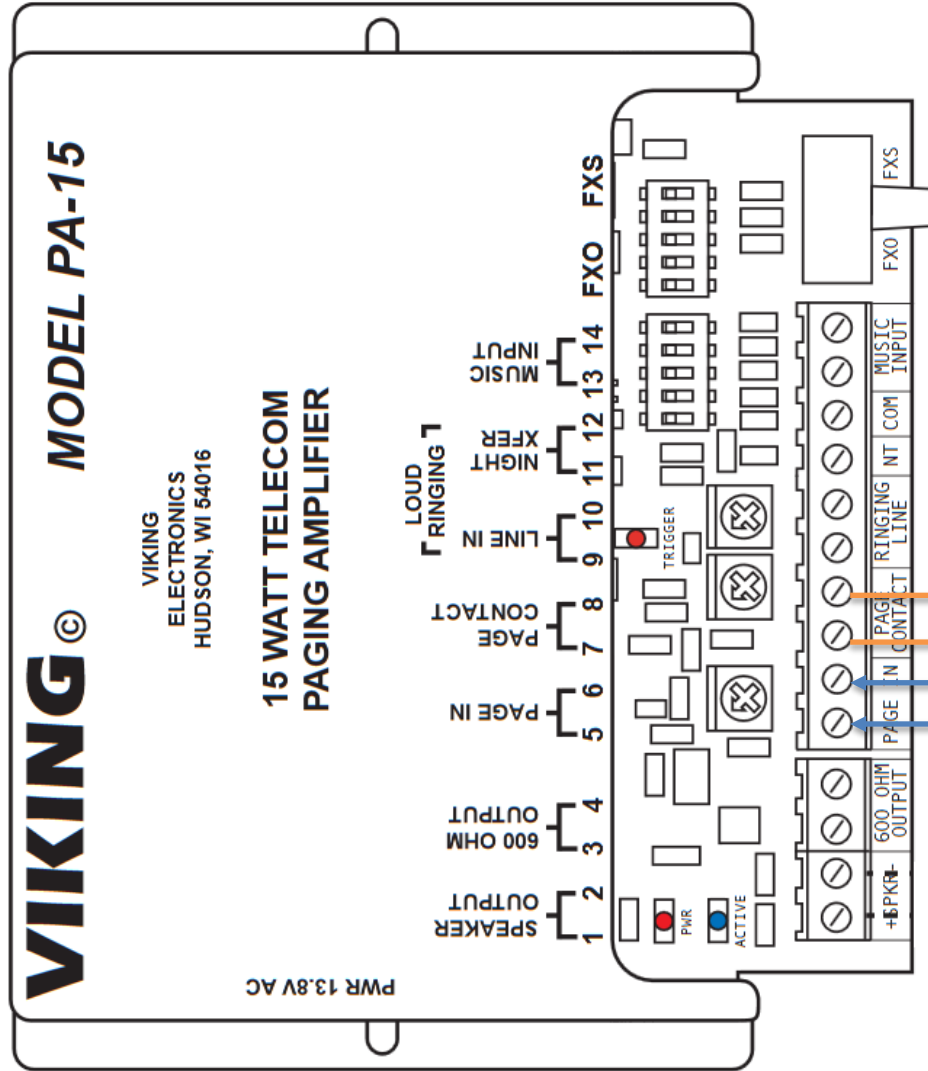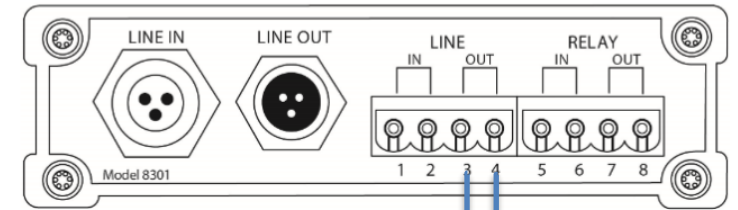
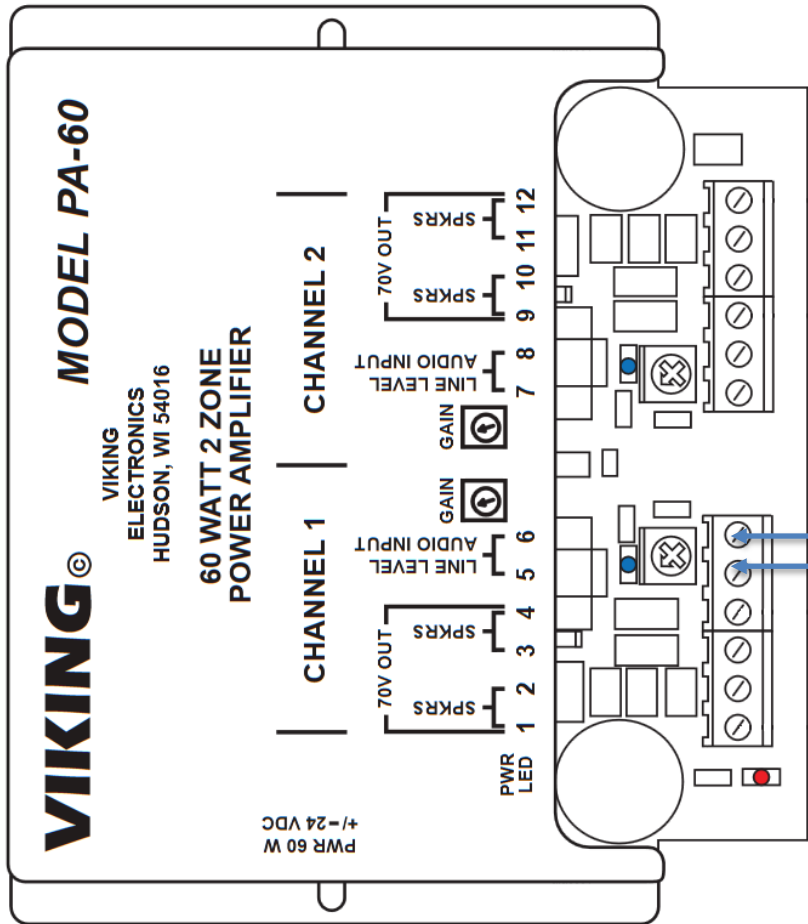Set DIP switch 4 for talk battery to the OFF position on the PA-2A to prevent damaging the 8301.

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".
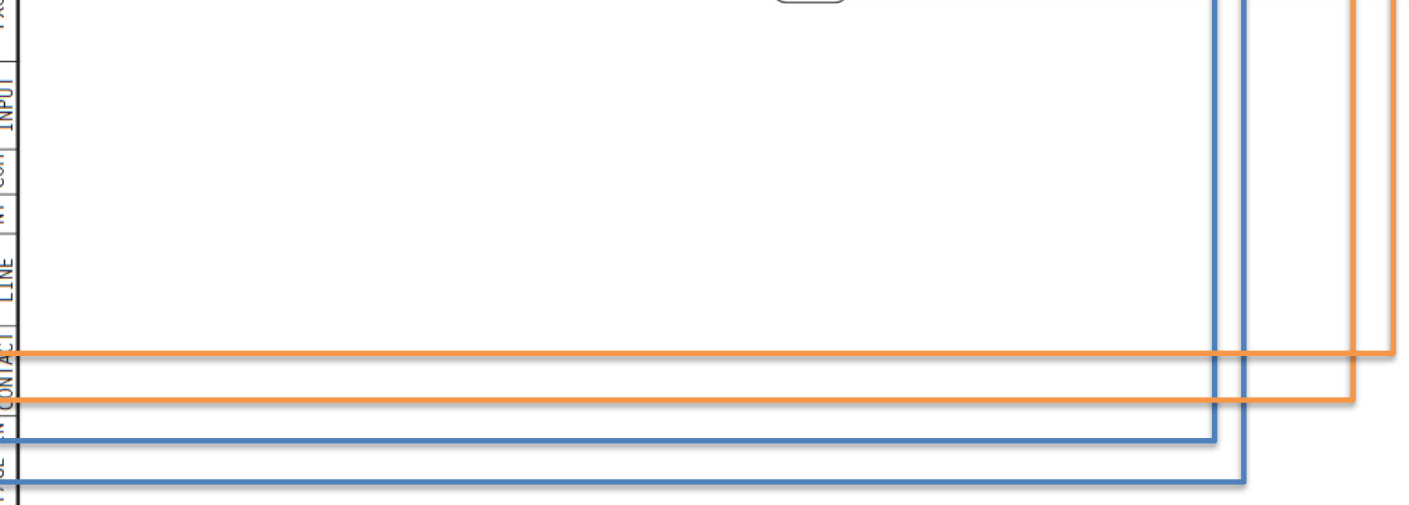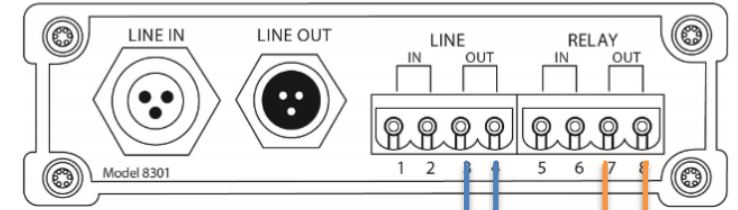
On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

On the 8301 web interface, go to Basic Settings -> Features and set the Line Out Analog Output Level to "0dBm 600 ohm (0.775 Vrms)".

If there are speakers connected to both channels, then an 8301 per channel will be required. One 8301 can be SIP registered and configured to Multicast to the second for zone paging including All Call.

ALGO

Please contact us if there are additional amplifier models you wish to see included in this guide.

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