

AMBIENT NOISE SENSOR SYSTEM



ANS501 with Sensor Microphone →



Bogen's **Ambient Noise Sensor System** electronically adjusts the level of a page or background music in applications where ambient noise levels are continuously changing. The ANS501 ensures that page announcements or background music are intelligible even during periods of high ambient noise levels. The system includes a sensor microphone module (ANS500M) that monitors the ambient noise level, and a 12V DC power supply.

Product Features:

- Automatically adjusts paging level as ambient noise levels rise and fall
- Balanced and unbalanced input and output
- AUX inputs bypass gain control feature
- Unbalanced stereo AUX inputs (*summed mono*)
- Supports up to 4 sensor microphones (*one ANS500M included*) wired in parallel for large areas
- Sensor microphones can be located up to 2,000 feet from control unit
- Only 2 wires needed for connection of sensor microphones
- Microphone module includes an adjustable mounting bracket for precise positioning
- Connects easily between pre-amp and power amp or to amplifier insert jacks
- Sensitivity control and max boost control
- Adjustable ramp speed

Power Requirements	Dimensions	Product Weight
12V DC Power Supply (included)	Control Unit: 5-1/4" W x 3" H x 1-1/4" D	1 lb.
	Sensor Microphone: 2" W x 2-1/8" H x 7/8" D	4 oz.

Music Bypass Input

Ambient noise controllers are a great benefit in applications where ambient noise conditions change significantly. Typically, these controllers raise and lower all the inputs to a sound system. However, there are instances where it may be desirable to keep a certain input from changing in response to ambient noise. A good example of this is a restaurant or lounge situation where background music is supplied at low levels to make the area seem less empty during quiet periods. Normally the background music is simply overpowered by the ambient noise of the crowd as it builds and this is desirable since the background music is of no real importance. It would be undesirable in this situation to have the background music increase in level as the ambient noise increases since the background music would only add to the ambient noise level and annoy the patrons. The ANS501 provides a special AUX input just for this type of application. This input is mixed into the output of the ANS501 after any level changes have been made and will not change with the ambient noise level. All other signals sent to the ANS501's normal input, like paging announcements, will have their level changed in response to changes in ambient noise, but the AUX Input level will remain fixed.

Accessories



ANS500M
Sensor Microphone
(*one included w/system*)

NIGHT RINGER

NR100

The **NR100** converts any paging system into an after-hours night bell alert system. The NR100 connects to the paging system's amplifier and emits a ringer tone through the paging system's speakers, thus eliminating the need for loud old-fashioned bells positioned throughout a facility. The NR100 is an efficient and easy way to alert security or personnel of incoming calls during non-business hours.



Product Features:

- Responds to 90V ring signals or external contact closures
- Produces dual-frequency electronic ringer tone
- Easily connects to any paging system
- Automatically mutes background music while ringing
- Ringer volume control
- Compact size
- Low current draw
- No maintenance
- FCC Part 68 Registered

Power Requirements	Dimensions	Product Weight
External 24V DC @ 25 mA, power supply (<i>not included</i>)	5-1/4" W x 3-1/4" H x 1-1/4" D	1 lb.

Simple Connections

Wiring consists of connecting the night answer port of the telephone system to the ringer inputs. The ring signal can be the actual 90V ring signal or it can be from a contact closure. The output of the NR100 connects to any paging system. If there is background music in the system, that too is fed to the NR100. When the night line rings, the NR100 will suppress the background music and begin to feed the electronic ring tone over the paging system. Background music will not be reapplied until the line stops ringing to ensure that no background music will be heard in between bursts of ring signal.

Accessories

PRS2403
24V DC
Power Supply



Contact Closures & Paging Ports

The VAR1 is ideally suited to provide a set of contact closures for paging ports of lower cost telephone systems that do not have a set of AUX contacts to trigger paging equipment. An adjustable trigger threshold keeps noise from falsely triggering the paging equipment, and the adjustable release delay (up to 25 seconds) keeps the paging system from dropping out in the middle of a page.

Low Cost Microphone Pre-Amp

The VAR1's built-in microphone pre-amp is a low cost and convenient device to use when a single channel of microphone pre-amplification is needed. Designed for balanced, low-impedance dynamic microphones, the VAR1 contains a MIC level control.

Accessories

PRS40C
12V DC Power
Supply



Applications

The TBA15 is an ideal complement to the ZPM3 (see page 36) for hands-free talk back in specific areas. Here are a few examples:

Stock Rooms: A large stock area can be paged with a question on availability and the stock clerk can simply shout back the answer, no matter where he/she is or what he/she is doing.

Commercial Kitchens: Allows hands-free communications between cooks and wait staff. This keeps the cook's hands off the telephone and on the meal, which is more sanitary and more efficient.

Security: This is a perfect way to get audio surveillance of remote areas. Simply dial up the zone for an area and listen for activity... even the tiniest sounds can be heard. By adding speakers, a large area can be monitored for activity. You can announce into these same areas, too.

Accessories



TAMB2
Telephone
Access Module



ZPM3
Zone Paging
Module

VOICE-ACTIVATED RELAY



VAR1

The **VAR1** is a relay device that monitors audio activity over a wide range of input voltages and operates two sets of C-Form relay contacts in response to detected activity. The **VAR1** can be used to detect voltages as low as signals directly from a microphone or as high as signals from 70V speaker systems. A low-level output of the detected audio, transformer-isolated from the input, is also made available for use with other equipment. Can also be used as a balanced, low-impedance mic pre-amp.

Product Features:

- Two sets of C-Form (both N.O. and N.C.) relay contacts respond to audio activity
- 4 levels of input signals: microphone, 600-ohm line, 25V, and 70V speaker systems
- Built-in balanced, low noise, high gain microphone pre-amp
- A transformer-isolated, 600-ohm small signal level output of detected audio available
- Works with self-amplified or central-amplified paging systems
- Separate microphone pre-amp gain control
- Adjustable release delay – 0.25s to 25s
- Trigger threshold adjustment
- Relay active indicator light

Power Requirements	Dimensions	Product Weight
External 12V to 24V DC @ 100 mA (not included)	5-3/8" W x 3-7/8" H x 1-3/8" D	1 lb.

TALK BACK AMPLIFIER

TBA15



The **TBA15** is a unique amplifier that permits loudspeakers to be used as microphones to provide hands-free, two-way conversations through the paging system*. In the idle state, the **TBA15** uses the attached speakers as microphones and feeds this signal out to a telephone line. When the **TBA15** senses a paging signal on the telephone line, it will switch on its 15W amplifier and use the speakers conventionally.

Product Features:

- Hands-free 2-way conversations through the paging system
- 15 watts of speaker power
- Works on 25V and 70V speaker systems
- Adjustable switching sensitivity control for switching from listen to talk
- Adjustable switch-back delay prevents chopping of pages and provides smooth 2-way conversations
- Talk Back and page volume controls
- Mute input forces amplifier into page mode
- Wall or 19" rack mount
- Perfect accessory for zone paging applications
- No moving parts for high reliability
- Resettable circuit breaker w/ thermal protection

* Page port connection should be a duplex line for talk back applications.

Power Requirements	Dimensions	Product Weight
120V AC	19" W x 5-1/4" H x 2-5/8" D	7 lb.

DIGITAL FEEDBACK ELIMINATION



Digital Feedback Terminator DFT120

The **DFT120** eliminates the acoustical feedback loop created by the telephone handset and the paging speaker while providing high-capacity, high-quality recording and playback of audio pages.

Product Features:

- High sampling rate for excellent playback quality
- Able to record a message while another is played
- Stacks up to 16 messages for playback
- 240 seconds of total audio memory
- Automatic or externally controlled unit operation for recording, play, and stop
- Activates recording by loop start trunk, 4-wire dry loop, audio trigger, or DTMF
- Digital recording and playback of pages, 60-second maximum message length
- Adjustable delay times between messages
- Message repeat, abort, stop, and pre-page tone option
- 8- or 600-ohm output impedances
- Zone control DTMF tones stripped from message and regenerated
- Easy installation and low maintenance
- Volume control
- Wall mountable
- Adapter included

Bottom View



Power Requirements	Dimensions	Product Weight
12V Power Supply (included)	10" W x 6-1/2" H x 1-1/2" D	2 lb.

Break the Feedback Loop

Acoustic feedback is the phenomenon that causes the annoying, high-pitched squeal that sometimes occurs in paging systems. Making a page in especially loud paging areas can be almost impossible because of acoustic feedback. Numerous ways of treating this problem, from re-aiming speakers to using special telephone mouthpieces, have been used with varying levels of success.

The DFT120 solves the problem of annoying feedback squeals once and for all by breaking the feedback loop that exists between the speakers and the telephone receiver. Every page is first digitally recorded and stored in memory. When the paging telephone is hung up, the DFT120 plays the recording back over the paging system, with no possibility of feedback.

Page Stacking

It is important to be able to record one page announcement after another without delay because paging announcements happen randomly. The DFT120 is designed for high traffic paging because of its ability to "stack" page announcements. New announcements can be recorded while an existing one is being played. In fact, the DFT120 can store up to 8 announcements at one time. Two separate banks of memory "ping-pong" between recording and playback to provide unimpeded access to the paging system.

Accessories



TAMB2
Telephone
Access Module

TONE GENERATOR

TG4C

The **TG4C** is designed to produce four different types of tones for use as alarm or announcement signals in paging systems. An audio signal can be routed through the TG4C to allow easy installation in paging systems. During generation of the tones, the routed audio will be suppressed.

Product Features:

- 4 types of tones: steady, pulsed alarm, slow whoop, and chime
- Tones triggered by external contact closure (momentary or long duration)
- Choice of continuous generation of tones or two-burst operation (except for steady tone)
- External audio signal can pass through the TG4C and is suppressed during tone generation
- Adjustable tone level & pitch
- 600-ohm output
- Tone generation reset available



Power Requirements	Dimensions	Product Weight
Wide power supply range, 12V to 48V DC @ 30 mA (power supply not included)	6-3/4" W x 5-3/4" H x 2" D	2 lb.

Easy To Use

The TG4C is designed to provide a wide range of alarm/warning tones for non-critical applications. An external contact closure triggers the generator. A momentary contact will produce two plays of the selected tone, while a continuous closure will regenerate the tone until it is removed.

Input Sharing and Priority

A unique feature of the TG4C is the unit's ability to pass through a signal and then suppress it during tone generation. This allows the TG4C to be installed in any paging system without losing an input. This feature also gives the tones priority over the signal it suppresses, a valuable feature in most alarm/warning situations.

Accessories



PRS40C
12V DC
Power
Supply



WMT1A
Matching
Transformer

DOOR PHONE



Shown with bezel frame (Included)



Shown without bezel frame

Analog Door Phone ADP1

Bogen's **ADP1 Door Phone** provides convenient remote, hands-free two-way communication between two locations. Durable, weather-resistant, stainless steel construction protects against vandals and varying weather conditions.

Product Features:

- Weather-resistant
- Vandal-resistant brushed stainless steel faceplate with mounting gasket and heavy-duty call button
- Suitable for indoor or outdoor station, door, or gate communication
- Secure entry access to commercial, industrial, or residential locations
- Push button initiates the call at remote location
- Connect directly to an analog PABX/KSU station programmed for ringdown operation
- Adjustable microphone and speaker volume
- Adjustable call timeout (15 seconds to 2 minutes)
- Call limit timer can be disabled
- Responds to CPC pulses
- Hands-free communications
- Auto-answer feature allows monitoring of remote location
- Powered by telephone line; no power supply needed
- Fits interior and exterior dual gang electrical boxes (user supplied)

Dimensions	Product Weight
5" W x 5" H x 1-7/8" D; 6-3/8" W x 6-3/8" H x 1-7/8" D (with bezel frame)	2 lb.

Connecting Amps to Other Equipment

When connecting amplifiers to other equipment, these transformers are a "must have" because they can solve a variety of problems.

- Where signal levels are insufficient to drive an amplifier's AUX input to full volume, installing either model on the input will increase the voltage to the input by about 5 times, providing plenty of level.
- Where input ground loops are causing a hum problem, the isolation transformer on either transformer can break the loop and eliminate the hum.
- When unbalanced signals need to be sent over long distances, either model can balance them at both the send and receive sides and reduce the possibility of noise pickup.
- Both models allow a microphone input to be used with an AUX-level signal input. By moving a jumper, the attenuation is changed on the high-impedance side to be 100 times less than the signal level on the 600-ohm side.
- The WMT1AS model can also convert 25V and 70V speaker levels down to the levels appropriate for AUX inputs on amplifiers.

MATCHING TRANSFORMERS

WMT1A, WMT1AS

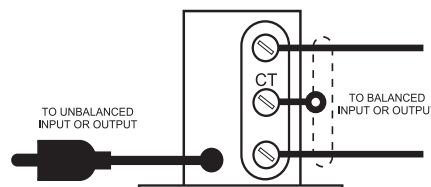


WMT1AS adapts speaker-level signals to AUX level.

Models **WMT1A** and **WMT1AS** are general-purpose matching transformers that allow proper connections between high (10k-ohm) and low (600-ohm) inputs and outputs. Both models can be used to balance an unbalanced line or provide isolation between two pieces of equipment. Both models can be configured to produce a balanced, microphone level signal from a line-level signal such as that from a pre-amp or music source. In addition, Model **WMT1AS** can adapt speaker level signals (25V/70V systems) to a level suitable for the AUX input of an amplifier.

Product Features:

- Hi-Z, 10k-ohm primary impedance
- Lo-Z, 600-ohm secondary impedance, balanced with center tap
- Matches high-to-low impedance or low-to-high impedance
- Adapts line-level signals to microphone inputs
- RCA connector for Hi-Z side
- Screw terminals for Lo-Z side
- Small steel enclosure w/ mounting ears allows easy mounting anywhere



Dimensions	Product Weight
2" W x 2-3/8" H x 1-1/4" D	4 oz.