

# SINGLE-ZONE TELEPHONE INTERFACE

## Single-Zone Universal Telephone Interface

**UTI1**  20  
CURRENT UNITS



Bogen's UTI1 is a single-zone telephone interface that is compatible with all standard analog port types. A background music (BGM) input with variable muting coordinates music and page announcements. An additional audio output provides a "page only" function (no BGM) for application flexibility. A built-in 24V DC, 1A power supply is provided for powering amplified speakers. Paging volume controls are provided for each of the outputs. An output limiter function, with limiter active indicator, provides consistent page volume regardless of loud or soft paging announcements. Contact-triggered tones and night ring signals, as well as programmable AUX relay contacts, are all programmed using DTMF tones through the dual-purpose override input. Plug-in terminal strips provide for easy installation. An optional security cover/rack mount kit (RPKUTI1) is available.

### UTI1 Control Panel



### Product Features:

- Emergency override & general paging
- One-way paging only
- Interfaces to Loop Start, Ground Start, Analog Station, and Page Ports (with or without contact closure activation)
- Simple 2-switch interface setup
- Background music (BGM) input with level control and variable muting
- Separate Page & BGM and Page Only (no BGM) outputs
- Level control for each output
- 24V DC, 1A power supply
- 150 Speaker T/R drive capacity per output
- Page level limiter with active indicator
- Adjustable automatic level control
- Override input (loop start or page port)
- Contact-triggered Night Ring input
- Programmable AUX Relay
- Pre-announce/confirmation tone
- Tone burst (2 to 7 sec), chime, and slow whoop tone selections
- Microcontroller operated, DTMF programmable
- Night ring tone or chime selection
- Setup test tone
- Pluggable terminal strip connectors
- Programming through override jack
- Programmable timeout for station mode
- Programmable trunk port timeout
- Responds to CPC disconnect signal
- Wall-mount design
- Rack-mountable with RPKUTI1 kit (optional)
- FCC Part 68 Registered
- Listed to UL Standard 60950 for US and Canada



UTI1 shown with optional rack mount / security cover kit



Power Requirements	Dimensions	Product Weight
120V AC, 0.5A	12-1/4" W X 5-1/4" H X 2-1/2" D (without rack mount kit)	5 lb.

### Programmable AUX Relay

The UTI1 provides a way for installers to decide how the AUX relay contacts will trip based on which inputs on the UTI1 are active. The UTI1 has 4 inputs: override, tone trigger, paging, and night ring. The installer can program the AUX relay to respond to one or any combination of these inputs. The UTI1 prioritizes these inputs (in the order shown above) so that higher priority inputs preempt lower ones, but the AUX relay contacts can be programmed to work independently of this hierarchy.

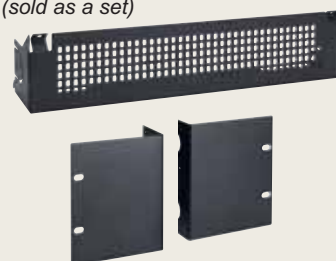
For example, the AUX relay could be programmed to respond only to a night ring trigger independent of anything else the UTI1 was doing. The UTI1 would suppress the night ring tone if a general page were made; however with the AUX relay programmed this way, the AUX relay contacts would remain active until the night ring input stopped regardless of the other UTI1 inputs.

The AUX relay contacts can also be programmed to operate after the triggering event has finished. In this case, the AUX relay contact activates for 1 second and then stops. This type of operation allows external equipment to be triggered after an event has occurred.

All this selectable functionality allows the installer improved ways to control external equipment in conjunction with the UTI1 operation. Programming is accomplished through simple DTMF programming codes.

### Accessories

**RPKUTI1**  
Security Cover & Rack Mount Kit  
(sold as a set)



# TELEPHONE INTERFACE



## Telephone Access Module

## TAMB2

The **TAMB2** interfaces a telephone system with a paging system allowing announcements to be made through any telephone. Any of three types of analog ports can be connected using the TAMB2: loop start trunk, ground start trunk, and station port (90V ring up). This wide range of port compatibility makes the TAMB2 indispensable for any telephone paging application because it eliminates the possibility of mismatching paging interfaces and port types.

### Product Features:

- Loop start, ground start, and station port (90V ring up) compatibility
- 600-ohm output
- Built-in confirmation tone indicating access to paging system (defeatable)
- Built-in pre-announce tone produced over paging system before announcement (defeatable)
- Adjustable tone volume
- Works with one-way and two-way (talk back) zones
- Background music input with volume control
- Suppresses background music during paging
- Station access disconnect is dynamically controlled using a combination of disconnect timer, silence interval timer, and Calling Party Control (CPC) signal detection
- Disconnect VOX timer is adjustable from 1 to 11 seconds (defeatable)
- Station Port maximum page times from 1 - 200 seconds
- VOX and default timers independently inhibitable
- Calling Party Control (CPC) signal from switch immediately disconnects station port
- 1 C-Form (N.O. and N.C.) contact pair available for operating external equipment
- Trunk Timer feature helps prevent system blockage
- 24V Talk Battery
- 24V DC @ 150mA power supply required (not included)
- FCC Part 68 Registered
- Listed to UL Standard 60950 for US and Canada



Power Requirements	Dimensions	Product Weight
24V DC @ 150mA (user supplied)	8-1/2" W x 1-3/4" H x 3" D	2 lb.

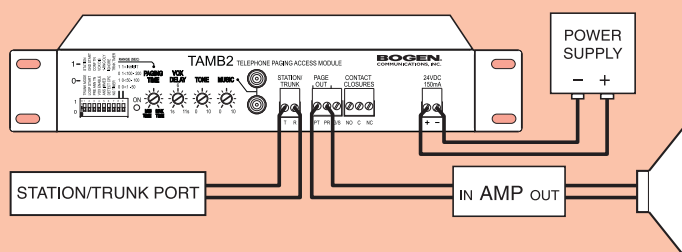
### Accessories



### Multiple Interface Options

The problem with selecting a telephone line interface device is knowing exactly what type of line will be available at the site. Because of mistakes in planning, a return trip to the supply house is not that uncommon. The TAMB2 was designed to eliminate this problem.

The TAMB2 has the ability to interface to ground start, loop start, and analog ring-up lines.



# MULTI-ZONE TELEPHONE INTERFACE

## Multi-Zone Universal Telephone Interface

### UTI312



Bogen's **UTI312** is a multi-zone paging controller with universal telephone interface. It is expandable from 3 to 12 zones in 3-zone increments using ZX3 expansion modules. Each zone has its own buffered paging output (*150 speaker drive capacity*) with volume control, a C-form relay contact and "zone active" indicator. Each module includes a pluggable 24V DC power distribution terminal strip and pluggable terminal strips for each zone for easy wiring. A built-in 24V DC, 1A power supply is provided for powering amplified speakers. The UTI312's universal telephone interface is identical to the UTI1 (page 31). Two background music (BGM) inputs, with volume controls, provide each zone with a choice of BGM sources or no BGM. Two tone triggers are available as well as a 90V night ringer input. Separate volume controls for the night ring and tone triggers, along with an adjustable page level limiter, make it easy to set appropriate levels.

Powerful software features provide the UTI312 enormous flexibility for demanding applications. 2-, 3-, 4-, or 5-digit dialing plans allow the UTI312 to fit into any dialing structure. Twenty-four zone groups, zone groups for each tone input and night ring as well as a zone group for the override input, provide plenty of installer flexibility. A programmable AUX relay contact, in addition to the zone relay contact, provides flexibility for controlling external equipment based on the UTI312's activity.

#### Product Features:

- Expandable from 3 to 12 zones (in 3 zone increments using ZX3 modules; one ZX3 module included)
- One-way paging only
- Interfaces to Loop Start, Ground Start, Analog Station, and Page Ports (with or without contact closure activation)
- Simple 2-switch interface setup
- 2 Background music (BGM) inputs with level controls
- BGM sources assignable per zone
- Level control for each zone output
- Zone active indicators
- C-form contact per zone
- 150 Speaker T/R drive capacity per zone
- 24V DC, 1A power supply
- Programmable AUX Relay
- Page level limiter with active indicator
- Adjustable automatic level control
- Override input (loop start or page port)
- Code calling capability
- 2 Tone trigger inputs for tone burst, chime, double chime, and slow whoop tone selections
- Contact and 90V Night Ring inputs
- Pre-announce tone
- Confirmation tone
- Separate night ring and tone volume controls
- 24 User-assignable zone groups
- Separate override, all-call, tone trigger, night ring, and code call zone groups
- Auto select paging zone group
- 2-, 3-, 4-, or 5-digit dialing plans
- Microcontroller operated, DTMF programmable
- Night ring tone or chime selection
- Setup test tone
- Pluggable terminal strip connectors
- Programming through override jack
- Programmable timeout for station mode
- Programmable trunk port timeout
- Responds to CPC disconnect signal
- Includes wall or rack brackets
- FCC Part 68 Registered
- Listed to UL Standard 60950 for US and Canada



UTI312 shown with 3 optional ZX3 Modules



Power Requirements	Dimensions	Product Weight
120V AC, 0.75A	16-3/8" W x 3-1/2" H x 4-7/8" D (without mounting flanges) 19" W (with mounting flanges)	8 lb.

#### Override Zone Group

The override input on the UTI312 has the highest priority of all the inputs but does not have to provide an All-Call function. Since the override has a zone group associated with it, the installer can determine which zones receive pages during an override.

For example, assume that in a 12-zone system 11 zones are used to provide audio to different parts of a building, but one zone is not used for audio purposes. The contact closure for this zone is used to control a door latch. When this zone is active, the latch is open. If the override was predefined to activate all zones, then the door latch would open during override operation which may not be desirable. By programming the override zone group with all zones except the one connected to the door latch, an override can be made and the door will remain locked.

#### Two Background Music Inputs

In a system with multiple zones, it is not uncommon to find applications that have different background music (BGM) requirements in different zones. To provide flexibility in these situations, the UTI312 has 2 BGM inputs. Each zone, through jumper assignments on the ZX3 module, can select one or the other BGM source, or none at all.

#### Auto Select Paging

When using the auto select paging feature, there is no need to dial a zone or zone group. Whenever the paging input becomes active, the auto select paging zone group, with user-assigned zones, will determine what zones are active. This may seem to be an unusual function for a multi-zone paging application. However, often the need for zoning is determined not by voice paging needs, but by the need to play tones in different zones.

In these instances, a shift change tone may need to be produced in the factory areas but not in the office areas. So a tone trigger zone group will be set up to channel the tone just into the factory. In this case, voice paging is done like an All-Call, but the tones are zoned.

#### Accessories

**ZX3**  
3-Zone Plug-In Expansion Module  
(one included with UTI312)





# PAGING CONTROL MODULES

## Paging System PCM2000

The PCM2000 Zone Paging System provides robust zone paging for applications requiring 1 to 99 zones, and up to 32 paging zone groups. Its multi-function modules ensure flexibility and future expansion with minimum time and expense.

### Product Features:

#### Paging Features:

- Allows for 1 to 99 paging zones, in 3-zone increments
- Up to 32 programmable paging zone groups
- Emergency All-Zone Override Paging input
- All-Call function can be disabled
- 250-watt power handling capacity (*separate amplifier required*)
- Works with systems that are central- or self-amplified, or mixed
- Drives up to 40 self-amplified speakers per zone module in low-power mode

#### Installation Features:

- Operates with 70V and self-amplified (24V) paging systems
- Future expandability up to 99 paging zones using 10 PCM2000 slave assemblies
- Universal Telephone Interface allows simple connection to loop and ground start trunks, to PBX or KEY paging ports, and to analog 90V station lines
- Easy connections using standard RJ11 and Euro-style terminal blocks
- Relay driver outputs mirror the operation of each paging zone to control external equipment
- Two C-form relay contacts change state when system is activated to control external equipment
- A setup tone can be produced by the system to check system operation and volume levels
- Easy programming of system features through the telephone
- System programming can be reset to factory defaults
- Wall-mountable (*brackets included*)
- FCC Part 68 Registered
- Listed to UL Standard 60950 for US and Canada

#### Background Music:

- No interruption of background music in zones not being paged (two amplifiers required)
- Inhibit background music in any zone
- Zone modules can accept separate background music sources

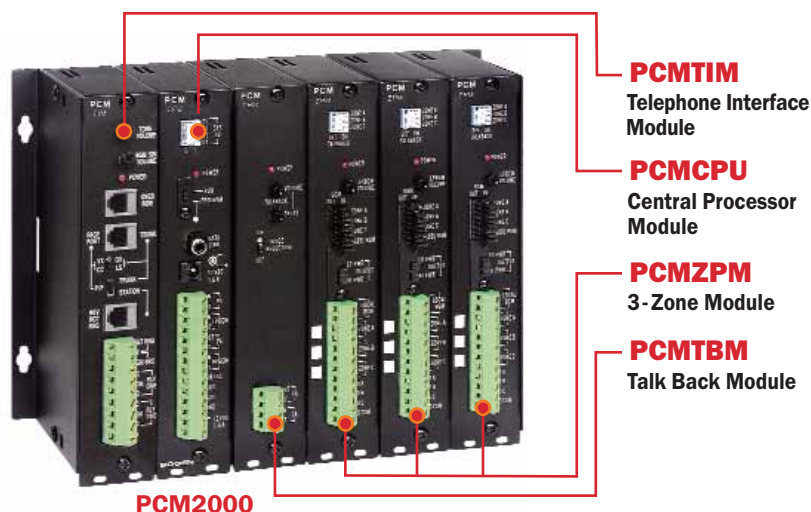
### FREE DESIGN GUIDE

#### PCM2000 CONFIGURATION GUIDE

This system configuration guide will assist you in designing zone paging applications.

It illustrates many popular applications for the PCM2000. This valuable guide is available to you at no cost. Download online at:

[www.bogen.com/documentindex](http://www.bogen.com/documentindex)



PCM2000

**PCMTIM**  
Telephone Interface  
Module

**PCMCPU**  
Central Processor  
Module

**PCMZPM**  
3-Zone Module

**PCMTBM**  
Talk Back Module

Works with both central-  
and self-amplified systems.

#### Night Ringer:

- Night Ring activated from 90V ring signal or contact closure
- Night Ring tone can be selected as either simulated ringer sound or chime
- Night Ring tone can be directed to a specific group of zones
- RJ11 input connector

#### Code Calling:

- Code-Call capability using pleasant chime sound
- Code calling can be directed into a specific group of zones
- Directly dial number of chimes produced or use preset table of chime patterns
- 1 or 2 automatic replays of the code call

#### Signal Tones:

- Contact closure input controlled tone annunciation
- Tone signaling can be directed into a specific group of zones
- Tone can be selected as tone burst, chime, or 4 quick beeps
- Tone can be selected to follow state of contact closure input or preset burst length

### Modules Required For Zone Paging Applications:

		Total Number of Zones in System									
		3	6	9	12	15	18	21	24	27	More Than 27 Zones
PCM2000 Modules	PCMTIM	1 Module Required For Each Total System									
	PCMCPU*	1			2			3			1 PCMCPU for every 9 Zones
	PCMZPM	1	2	3	4	5	6	7	8	9	1 PCMZPM for every 3 Zones
	PCMTBM	1 Module Required For Each Total System (optional module for talk back or time tone options)									

\*Note: One PCMP52 Power Supply (not included) is required for each PCMCPU Module.

**Time Tones\*:**

- Built-in real-time clock
- Controls up to 8 time-triggered tone-signal events
- Each time-triggered event's tone can be directed to a specific group of zones
- Time-triggered tone burst length adjustable (2-8 seconds) or chime tone
- Simple programming of times and events through the telephone
- Master clock synchronization ability

**Two-Way Communications\*:**

- Provides hands-free, 2-way talk back communications in 70V paging systems (amplifier required)
- Zones can be individually selected to be talk back or one-way only
- "Privacy Beep" can be enabled in talk back zones to prevent eavesdropping

\*Requires PCMTBM Module

**Technical Specifications for PCM2000:**

Model	Power Requirements	Audio Power Capability*	Operating Current	Dimensions	Product Weight
PCM2000	12V DC@1.5A Power Supply (not included – PCMP52 recommended)	250W (9-zone system)	1.5A max. (9-zone system)	1-1/2" W x 7-1/2" H x 4-1/4" D, each module	1 lb., each module

\* Separate Amplifier Required

## Pre-Assembled Paging System

# PCMSYS3

The PCMSYS3 is a pre-assembled and tested 3-zone PCM system with a PCMP52 power supply. Use it right out of the box for 1 to 3 zone applications or expand it with other PCM modules.

**Ready-To-Go,  
right out of the box.**

**Contains:**

- 1 PCMTIM - Telephone Interface module
- 1 PCMCPU - Central Processor module
- 1 PCMZPM - 3-Zone Paging module
- 1 PCMP52 - System Power Supply

**Expansion:**

- Add PCMZPM modules for up to 9 zones
- Add PCMTBM module for talk back and realtime clock/tone applications
- Add satellite assemblies for up to 99 zones

**Accessories**

### RPK88 Rack Mount Kit

Module housing for 10 modules max., with 12 wiring saddles, knockouts for wire access, and 8 mounting brackets.



**RPK84**  
Rack Mount Kit  
2 panel adapter,  
6 modules max.



**PCMP52**  
Power Supply  
(12V DC)

**PCM2000 Modules:****PCMTIM****Telephone Interface Module**

A universal interface connects to any type of telephone port, rapidly and trouble-free. Provides input for night ringer and emergency page override. One required per system.

**PCMCPU****Central Processor Module**

The PCMCPU controls system operation and holds all programmed parameters. One required for every 3 PCMZPM modules (9 paging zones).

**PCMZPM****3-Zone Module**

The 3-Zone module provides 3 paging zone outputs. Increasing system capacity is as easy as adding an additional module, up to 3 zones at a time. The zone outputs can drive 70V or self-amplified speaker systems. Relay driver outputs mirror the state of each paging zone to control external equipment. If desired, the system-wide background music can be disconnected and a separate music source can be connected to any PCMZPM module. Background music can also be inhibited in any zone.

**PCMTBM****Talk Back Module (optional)**

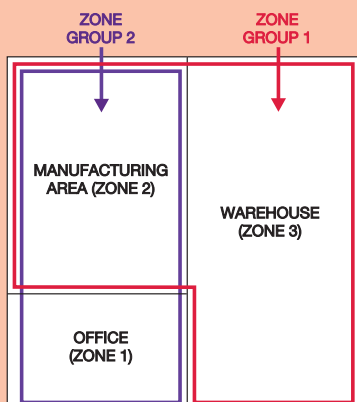
Allows 2-way, hands-free talk back communications throughout the paging system. The built-in real-time clock allows up to 8 user-scheduled time tones to be emitted in a specific group of zones. The clock can be synchronized with an external master clock. Only one PCMTBM is required for the entire system, when needed.

### Zone Groups

One of the unique features of the ZPM3 is its ability to group together a number of zones and page in to them at the same time. Many times the functional layout of a facility dictates how the paging zones are arranged. However, the people you are trying to contact may spend their time in more than one zone area. By grouping zones, you increase your chance of contacting that person.

An example of a typical 3-zone facility is a medium size location with an office area, manufacturing area, and warehouse. Each area is set up as an individual zone. A number of employees may spend their time in both the manufacturing and warehouse areas. By grouping these two zones and paging simultaneously into both, the chances of the page being heard by the specific individual are greatly improved.

For this same facility, the ZPM3 can also produce a tone that will be heard only in a specific group of areas. This is ideal for signaling within the factory for breaks, lunch, and shift changes – but will not be heard in the office area. An external contact closure from a master clock is typically used to trigger the tones.



### Accessories



**PRSLSI**  
Power Supply  
(24V DC)



**PRS48**  
Power Supply  
(48V DC)



**TAMB2**  
Telephone  
Access Module



**TBA15**  
Talk Back  
Amplifier

## ZONE CONTROL MODULE



### 3-Zone Paging Module

### ZPM3

The ZPM3 allows for economical one- or two-way paging (w/ TBA15 Talk Back Amplifier) to be directed to any of up to 3 different paging areas. Zones can be grouped together so that more than one zone is paged at the same time. All areas can also be paged at once. Zone selection can be made using DTMF tones or pulse dialing.

#### Product Features:

- 3-Zone paging plus All-Call
- 3 easily programmable zone groups (1-3 zones in each)
- One-way and two-way paging (talk back operation requires TBA15 Talk Back Amplifier)
- 100 watts total power handling capability
- Background music input
- Directly interfaces to paging ports (requires contact closures), loop start, and ground start trunks
- Interfaces to station ports using TAMB2 Telephone Access Module
- Operates with central-amplified (70V) and self-amplified (24V) paging systems
- Selectable pre-announce and confirmation tones signal back through the handset and over the paging system
- Built-in night ringer triggered from 90V ring or contact closure
- Separate night ringer zone group
- Two selectable tone types can be directed to one or more zones for shift change or emergency announcements (separate zone group)
- Privacy beep can be enabled during two-way operation to prohibit eavesdropping
- Separate volume controls for tones, night ring, and background music
- 24V or 48V talk battery option
- 48V operation requires additional PRS48 power supply
- Optional back-up battery retains zone group field programming (batteries not included)
- FCC Part 68 Registered
- Wall-mount design
- Screw terminal connections
- Industrial grade steel cabinet



Power Requirements	Dimensions	Product Weight
External 24V DC @ 350 mA	9" W x 7-1/4" H x 1-3/8" D	3 lb.

# VOIP GATEWAYS FOR PAGING

## Network-Enabled Paging

**MVP130BG,  
MVP210BG,  
MVP410BG,  
MVP810BG**



Bogen's Voice Over IP Gateways (VoIP) allow paging communications to be sent over the Internet or Intranet. Each gateway connects directly to Bogen paging systems and equipment to provide overhead paging to all locations within a facility or across a campus without running new lines.

### Product Features:

- Ethernet connectivity and full IP compatibility with existing routers and WAN infrastructure
- Single- or multi-zone paging at any or all locations when used with Bogen's Multi-Zone Universal Telephone Interface (UTI312); 1-, 2-, 4-, and 8-port/zone models available
- Efficiently communicate company-wide emergency alerts or general announcements, saving both time and money while improving communication
- Connects directly to phones or PBX; compatible with virtually any telephone port type
- One-port model supports FXS and FXO; multi-port models support FXS, FXO, and E&M
- FXS/FXO connector on each port for direct analog connection to Bogen's telephone paging interfaces
- Multi-port models provide contact closure Receive & Transmit in E&M mode capabilities
- Configurable from a web browser
- Gateways are easily managed locally using a Windows®-based software application or remotely with a web browser or SNMP

- Can also be used for toll-free voice and fax communication when connected to phones, fax machines, key systems, PSTN lines, or a PBX to provide real-time, toll-quality voice connections to any office on your VoIP network
- Utilizes H.323 or SIP protocols to provide complete inter-operability with other Internet telephony solutions
- FCC Part 68 Registered
- UL and C-UL listed

Model	Max. Port Capacity	Dimensions	Product Weight
MVP130BG	1	4-3/8" W x 1" H x 5-5/8" D	1 lb.
MVP210BG	2	6-1/4" W x 1-1/2" H x 9" D	2 lb.
MVP410BG	4	17-1/2" W x 3-7/8" H x 8" D	8 lb.
MVP810BG	8	17-1/2" W x 3-7/8" H x 8" D	8 lb.

Windows® is a registered trademark of Microsoft.

