PagePac®
by VALCOM

PAGEPAL®
V-5335700

INTRODUCTION

The PagePal unit interfaces most telephone systems (PBX, KTS, Centrex) to virtually any public address audio system.

In addition, PagePal furnishes inputs for customer provided background music and auxiliary inputs (Such as an attendant microphone, a radio receiver, recorded announcements). Control inputs are provided for tones generated by the PagePal. PagePal can be placed on a desk or shelf, or mounted to a wall.

Note: Only line level microphones may be used with PagePal.

SPECIFICATIONS
FEATURES

- Telephone Access from:
    - Loop start trunk port
    - Ground start trunk port
    - Analog PBX station, Centrex or CO lines
    - Dry loop page ports (4-wire) with contact closure
- Level controls to set attendant input and background music, relative to telephone level
- Simplified connections via modular telephone jack and lugless terminal block

Power Requirements

- Included power supply plugs into standard AC outlet

Dimensions/Weight

- 2.50" H x 6.00" W x 4.00" D
  (6.35cm x 15.24cm x 10.16cm)
- 2.0 lbs. (0.91 kg)

Environment

- Temperature: 0 to +40°C (+32 to +104°F)
- Humidity: 5 to 95%

OPERATION

Inputs are routed to the output with the following priority (highest to lowest):

1. Attendant access for emergency announcements
2. Telephone access for general paging
3. Alert Tone 1 (Siren) for evacuation warning
4. Alert Tone 2 (Chime) for time clock, door bell, security alert, etc
5. Night bell for after-hours calls to ring over the public address system
6. Music input for background music
7. Override or busy tone is returned to the telephone user if a higher priority input is active
8. Call confirmation and preannouncement tones may be optioned
9. An optional contact closure output is provided to control auxiliary equipment (music/page switching, recorder logging, etc)
10. Station access mode features:
    - VOX (Voice Operated Switch)
    - Maximum length off-hook timer
    - Responds to open loop disconnect
    - Dial tone detection and disconnect
11. Loop Start Supervised (LSS) access mode provides VOX and maximum length off-hook timers for use with a Loop Start Trunk Port

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INSTALLATION

Input Access / Switch Settings

A four position slide switch is used to select the telephone access mode.

- **(LS) Loop Start**
  Used with a Loop Start Trunk Port of a PBX or Key System or a dedicated phone set.

- **(GS/LSS)**
  Ground Start/Loop Start Supervised
  Access from a PBX Ground Start Trunk Port. In this mode, the PBX ground **must** be connected to pin 1 of the 20-pin connector on the PagePal® or pin 2 of the RJ11 connector on the PagePal.

  In Loop Start Supervised mode, pin 7 of the PagePal **must** be connected to pin 1 on the 20-pin connector to allow supervision of the Loop Start Trunk Port. The PagePal will supervise the connection, and will automatically disconnect the line if no voice is detected on the line for 20 seconds or if the line remains active (Off hook) for more than one minute.

- **(SA) Station Access**
  Used with a standard (ANALOG) station port on a CENTREX, PBX, Key System or Central Office subscriber line. Use a two-wire RJ11 cable in this mode. The PagePal receives talk battery and ring voltage from the host system.

- **(DL) Dry Loop**
  Interfaces with the Page Port of a PBX or Key System or an Auxiliary port of a PBX. This input shall respond to resistances from 0 to 1K Ohms and will ignore resistance greater than 10K Ohms. Use a four-wire RJ11 cable in this mode. Dry Loop is a four wire connection. Pins 2 and 5 of the RJ11 are intended to interface with the control leads of the host system, while pins 3 and 4 connect to Tip and Ring, as usual. See Table 2 for pinout descriptions.

Main Output

Adjusts level of output. Full clockwise rotation provides 14dBm gain.

Set the Main Output level first using telephone input, then adjust Attendant and Music Inputs for an appropriate relative level.

Attendant Input

Adjusts level of Attendant Input relative to the Telephone Input. Adjustment range is from 0dBm to less than -30dBm.

Music Input

Adjusts level of Music Input relative to the Telephone Input. Adjustment range is from 0dBm to less than -30dBm.

TECHNICAL ASSISTANCE

When calling, have a VOM and a telephone test set available and call from the job site. Call (540) 563-2000 and ask for PagePac Technical Support, or call (540) 767-1555 for Valcom 24-hour Faxback System or visit our websites at http://www.pagepac.com and www.valcom.com.

Should repairs be necessary, attach a tag to the unit clearly stating company name, address, phone number, contact person and the nature of the problem. Send the unit to:

Valcom, Inc.
PagePac® Repair Dept.
5614 Hollins Road
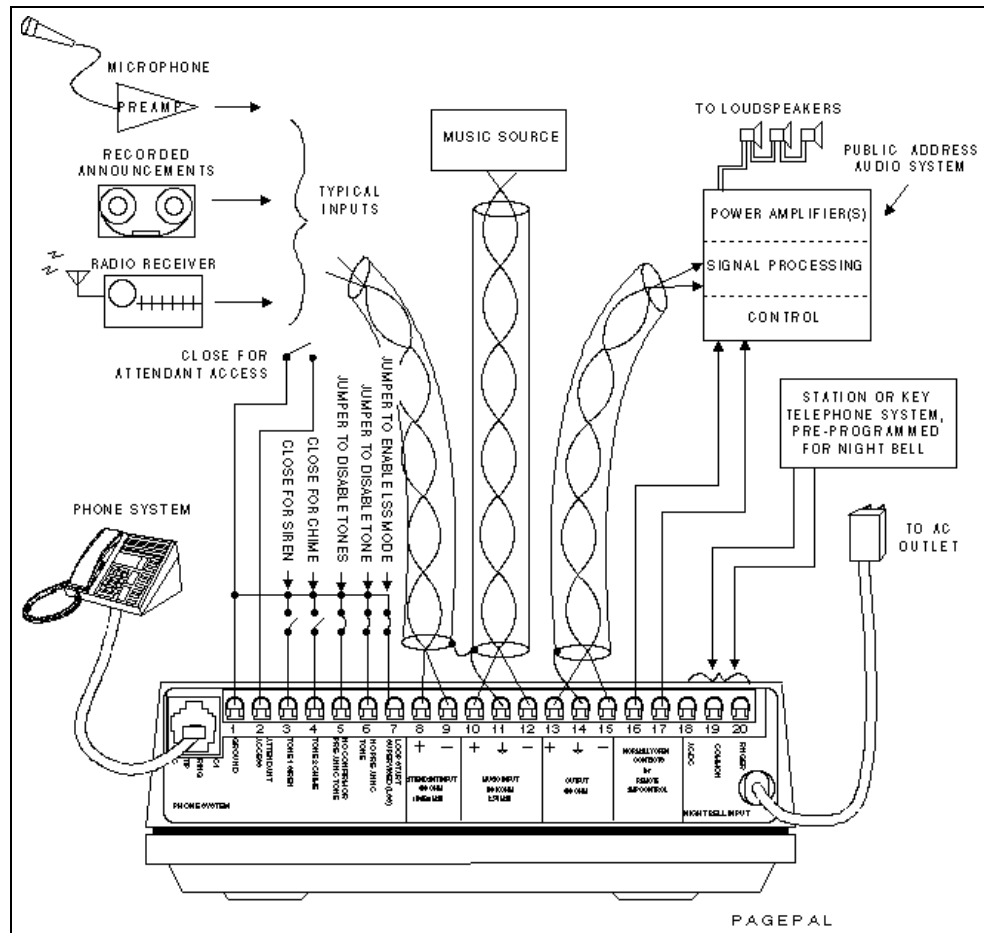**Roanoke, VA 24019-5056**

FIGURE 1
Typical Connections to the PagePal® Connectors (Rear Panel View)
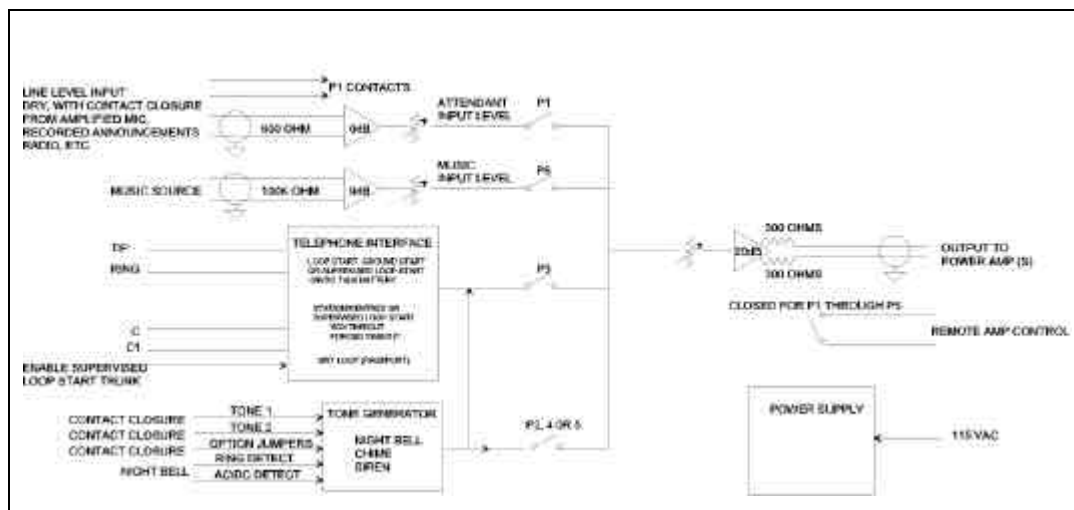Refer to Tables 1 and 2 for Description

FIGURE 2
PagePal Functional Block Diagram

Table 1. PagePal® J2 Terminal Block Connector

Terminal	Description
1	Ground for ground start/common connection for Terminals 2-7.
2	Close a contact between this terminal and J2-1 to activate attendant access.
3	Close a contact between this terminal and J2-1 to active TONE 1 (Siren).
4	Close a contact between this terminal and J2-1 to activate TONE 2 (Chime).
5	Connect a jumper between this terminal and J2-1 to disable confirmation and preannouncement tones.
6	Connect a jumper between this terminal and J2-1 to disable the preannouncement tone.
7	Connect a jumper between this terminal and J2-1 to enable Loop Start Supervised (LSS) mode (You must also set the slide switch on the front panel to the GS/LSS position).
8	Attendant input, + phase of balanced 600 Ohm input.
9	Attendant input, – phase of balanced 600 Ohm input.
10	Music input, + phase of balanced 100K Ohm input.
11	Ground for optional shield termination of music input.
12	Music input, – phase of balanced 100K Ohm input.
13	Audio output to paging system, + phase of balanced output, 300 Ohm.
14	Ground for optional shield termination of output.
15	Audio output to paging system, – phase of balanced output, 300 Ohm.
16	Normally open contact (with J2-17) that may be used to activate paging equipment.
17	Normally open contact (with J2-16). Contact is closed when any input with priority higher than music is present.
18	Night bell Input from key systems. Night bell is activated by any low voltage greater than 10VAC/DC.
19	Common terminal for night bell input voltage.
20	Night bell input from ringer voltage.

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Table 2. RJ-11 Pinout

Pin Number	Description
1	Not Used.
2	C1 control input for Dry Loop (Page Port) activation by closure (May also be used for Ground Start grounding point).
3	Ring (– polarity is important for Ground Start).
4	Tip (+ polarity is important for Ground Start).
5	C control input for Dry Loop (Page Port) activation by contact closure.
6	Not Used.

Terminal Block Connector
This is a 20 Pin lugless-type terminal block located at J2 (See Figure 1). See Table 1 for contact descriptions.

Factory Test Connector Wall Plug Transformer
J3 - No user connections 115VAC, 60Hz, UL and CSA Listed.

Table 3. Troubleshooting Suggestions

Problem	Troubleshooting Steps
Night bell is not active when it is intended to be activated with a low AC or DC voltage	The input voltage level is too low or missing (Minimum 10VAC). Make sure that the input connections are to pins 18 and 19 of J2 (Polarity is important). A higher priority in the PagePal® is active. Check the MAIN OUTPUT volume control setting.
Night bell is not active when it is intended to be activated with a Ring voltage	The input voltage level is too low or missing (Minimum 40VAC). Make sure that the input connections are to pins 19 and 20 of J2. A higher priority in the PagePal is active. Check the MAIN OUTPUT volume control setting.

Problem	Troubleshooting Steps
Alert Tone 2 is not functioning	Check the connection to the back panel, pins 1 and 4 of J2. Check the MAIN OUTPUT volume control setting. Using an Ohm meter, verify that a contact closure is being provided from the host equipment. A higher priority in the PagePal® is active.
When using the PagePal in the Page Port mode, a busy tone is returned when attempting to access the PagePal	Verify that the Telephone Access Switch is in the proper position for the application (DL). Verify that Attendant Access is not active.
The PagePal is not being accessed in the Ground Start mode	Verify that the host telephone system's ground is connected to Pin 1 of J2 on the PagePal or Pin 2 or the RJ-11 jack. Verify that the Telephone Access Switch is in the proper position for the application (GS). Tip and Ring may be reversed (The Ring is always more negative than the Tip). Excessive loop length.
The PagePal answers a station call, then immediately hangs up	Verify that the Telephone Access Switch is in the proper position for the application (SA not GS).
Dry loop (Page Port) mode will not access PagePal	Pins 2 and 5 of the RJ11 connector must be closed by a contact from the PBX when access is desired.
Alert Tone 1 is not functioning	Check the connection to the back panel, pins 1 and 3 of J2. Check the MAIN OUTPUT volume control setting. Using an Ohm meter, verify that a contact closure is being provided from the host equipment. A higher priority in the PagePal is active.
Attendant Access is not functioning	Check the connection to the back panel, pins 1 and 2 of J2. Check the MAIN OUTPUT volume control setting. Check the ATTENDANT INPUT volume control setting. Using an Ohm meter, verify that a contact closure is being pro- vided from the host equipment.
Hum, buzz or noise on the output in the Attendant Access mode with a Attendant Access source connected in an unbalanced configuration.	Using a jumper wire, short the un-used Attendant Access input pin to pin 8 of J2.
Low Volume on the output.	Adjust gain controls. The wrong impedance is attached to the output.