

Establishing a VoIP Public Address System

Use Rapid PA™ to Create a Public Address System Based on Xorcom XPP™ Technology

Overview

Rapid PA is an add-on for Xorcom IP-PBX and Atribank channel banks that interfaces with any Xorcom FXS port to provide public address functionality. The small stand-alone unit is activated by simply dialing the port's extension number.

Each Rapid PA unit is equipped with 2 RJ11 ports. The 'PBX' port connects directly to a Xorcom FXS port and the 'PA' connection connects to the PA 'line in' ('audio in') port. The PA device itself can be anything from a standard personal computer speaker with an internal amplifier to an industrial-strength amplifying system.

Figure 1: Rapid PA connected to Atribank and loudspeaker with internal amplifier



For a description of the connection pins setup see Table 1, below.

How it Works

Rapid PA does not need a power supply – it uses the FXS feed for its operation. A LED (Light Emitting Diode) indicates “line active” status, simplifying installation and testing. When a call is placed to the FXS port extension to which the Rapid PA is connected, the Rapid PA immediately “answers the call” (i.e., goes to “off hook” position) and the caller can place his/her call through the IP system. The origin of the PA message is not important; it can be an analog phone, an IP phone, a call from an incoming line or even from a soft phone overseas. The PA system is automatically disconnected when the call terminates.

The small size and simple installation of the Rapid PA unit makes it easy to install multiple local PA amplifiers in different locations. Even a low cost PX loudspeaker (with built-in amplifier) can be used as a small PA system.

Multiple Rapid PA devices can be connected to multiple FXS ports and loudspeakers to provide multi-zone support.

Implementing the Rapid PA

Each FXS line connected to the Rapid PA must be defined as Kewl Start, as per Xorcom's default setting. If for any reason the setup is different, see the "Kewl Start Setup Procedure" below for proper settings. This is important in order to enable automatic disconnection from the PA system when the call terminates.

Note: Rapid PA should be located close to the PA amplifiers.

Table 1: Wiring Table

RJ11 Connector/Pin	Description	Notes
PBX 1	Not connected	
PBX 2	FXS port TIP or RING	Crossing Pin2 and 3 is OK
PBX 3	FXS port TIP or RING	Crossing Pin2 and 3 is OK
PBX 4	Not connected	
PA 1	Not connected	
PA 2	PA Audio In	Crossing Pin2 and 3 is OK
PA 3	PA Audio In	Crossing Pin2 and 3 is OK
PA 4	Not connected	

Kewl Start Setup Procedure

In the /etc/dahdi/system.conf file the channel must be defined as "fxoks". For example:

```
fxoks=1
```

In the /etc/asterisk/chan_dahdi_additional.conf file the channel must be defined as fxo_ks.

For example:
 signalling=fxo_ks

For more information about this application and or Xorcom products in general, please contact us using the details below.