IP Office Technical Tip

Technical Tip No: 023 IP Office External Output Port
Date: 7th October 2003

Product: IP Office **Revision:** 1.0	**Version:** 1.3(x), 1.4(22) **Date:** 7th October 2003

Issue

Avaya SMBS Technical Support and Pre Sales have been receiving requests surrounding the IP Office External Output Port. This Technical Tip looks at the use of the IP Office's external relay port. This is the port marked as EXT O/P on the rear of all IP Office Control Units.

This port can be used to control up to two external devices through shortcodes, Phone Manager Pro and/or Voicemail Pro call flows.

This Technical Tip is also available as an IP Office Job Aid found on the Avaya support and Avaya Business Partner website.

Using the External Output (Door Relay) Port

All the IP Office control units are equipped with a external output port. This port, frequently also called the "door relay port", can be used to control up to two external devices.

The port is marked as **EXT O/P** and is located on the back of the control unit adjacent to the power supply input socket. It provides two relay connections. Through the IP Office the two relays can be switched on, off or pulsed (on for 5 seconds). This can be done using shortcodes, through the Door tab in Phone Manager Pro or via the Open Door action in Voicemail Pro.

As the alternate name for the port suggests, the usual application for these relays is to activate door release systems. However, as long as the criteria for maximum current and voltage are meet, the relays can be used for other applications.

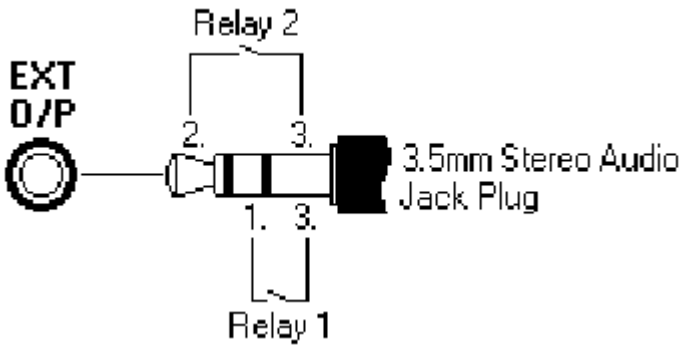
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Wiring Connection

The pin numbers used in the diagram below relate to those used in the IP Office Installation Manual.

3.5mm stereo audio jack plugs are frequently sold as pre-wired sealed units. It may be necessary to use a multi-meter to determine the wiring connections from an available plug. Typically 3 (common to both relays) is the cable screen.



- Switching capacity: 0.7A
- Maximum voltage: 55V dc.
- On state resistance: 0.7..
- Short circuit current: 1.0A
- Reverse circuit current capacity: 1.4A
- Ensure that 1 and 2 are always at a positive voltage with respect to 3.

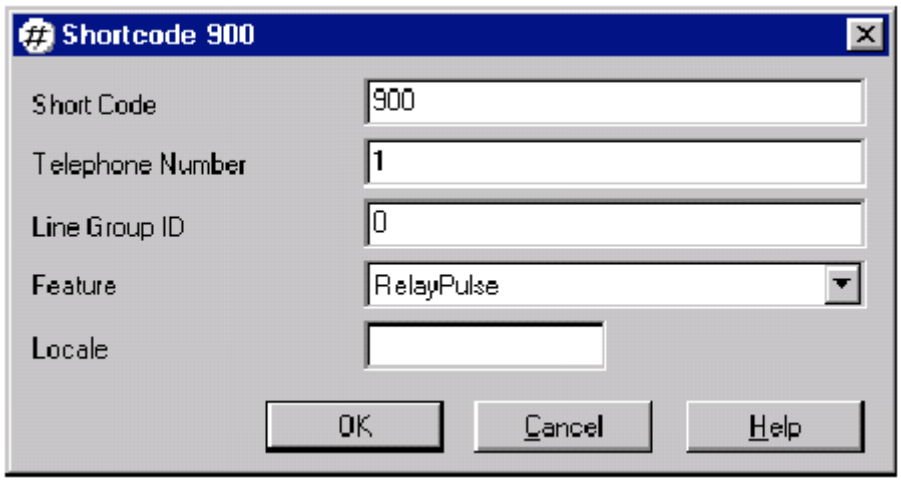
Shortcode Controls

The IP Office is installed with a number of default shortcodes for external output operation. These are:

Relay State	Relay 1	Relay 2
- On	*39	*42
- Off	*40	*43
- Pulse	*41	*44

If necessary these shortcodes can be deleted and a new system or user shortcode added. The shortcode will be similar to the form shown below

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- **Short Code:** Replace with whatever dialing should trigger the relay action.
- **Telephone Number:** Enter either ***1*** for relay 1 or ***2*** for relay 2.
- **Feature:** Select ***Relay On***, ***Relay Off*** or ***Relay Pulse***.

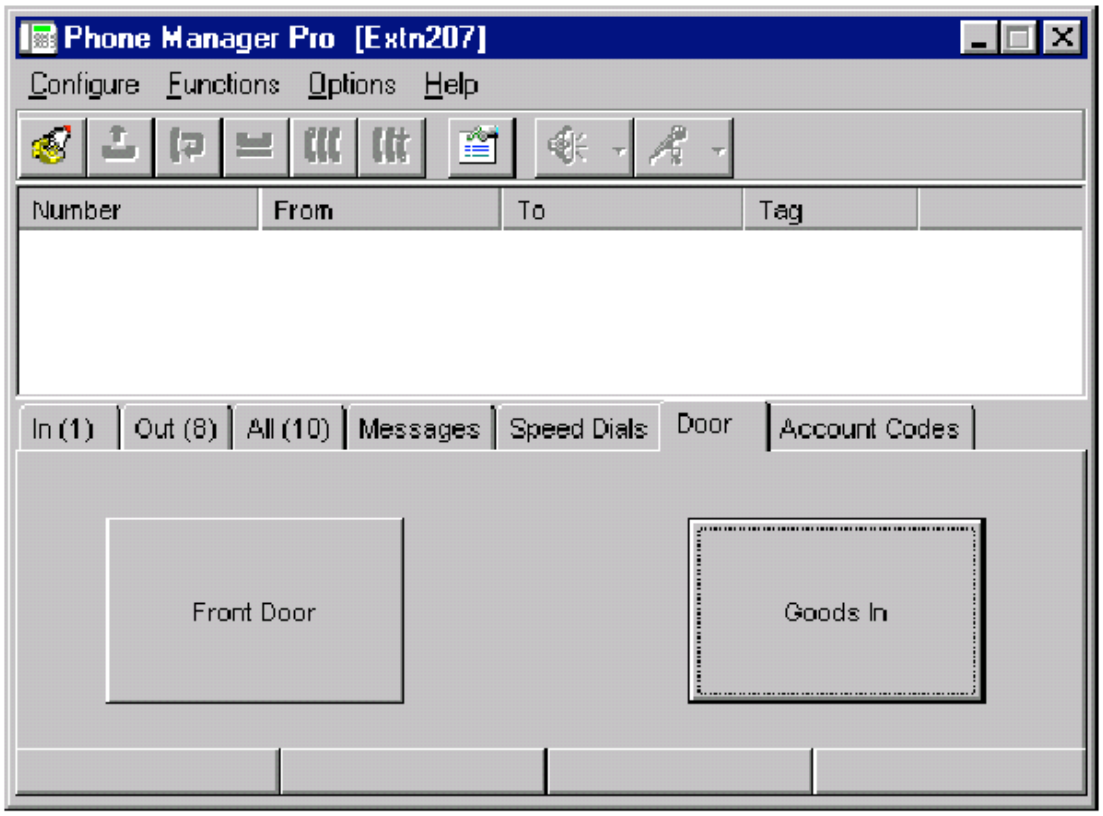
Phone Manager Pro

Phone Manager Pro

Phone Manager Pro can be used to pulse either of the external relays. This is done through the Door tab. This tab is only shown when a door entry button is configured.

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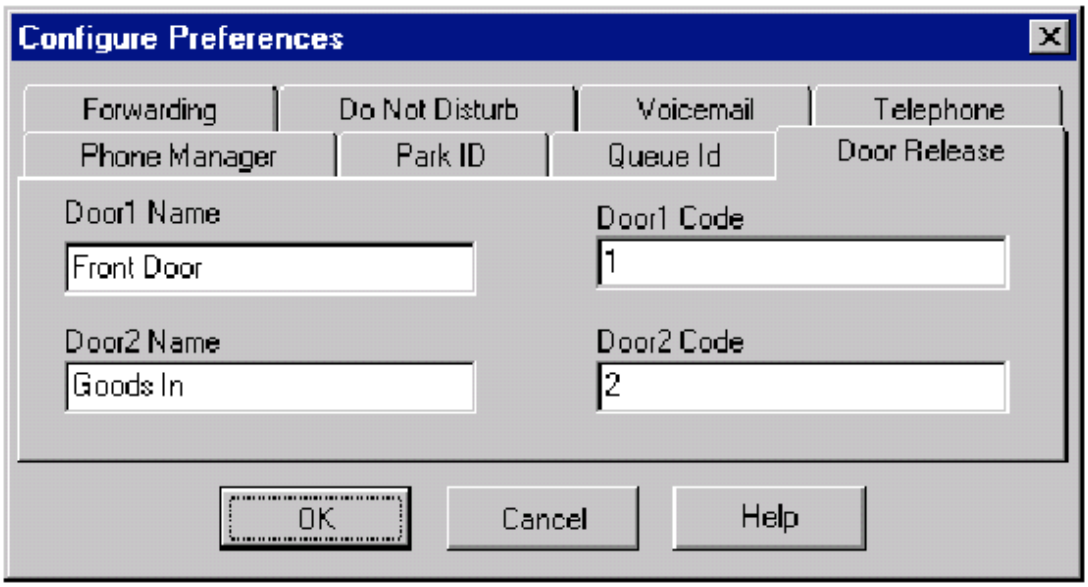
Note: The Phone Manager Pro user can trigger the door relays through this tab even when they are on a call.

Configuration

1. Within Phone Manager Pro, click on the Configure Preferences icon.
2. Select the Door Release tab.

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3. For **Door1 Name** and **Door2 Name**, enter the text to display on buttons in the Phone Manager Pro's **Door** tab.

4. In the **Door1 Code** and **Door2 Code,** enter the relay number that each button on the **Door** tab should pulse. If no number is entered the button is not shown.

5. Select **OK**.

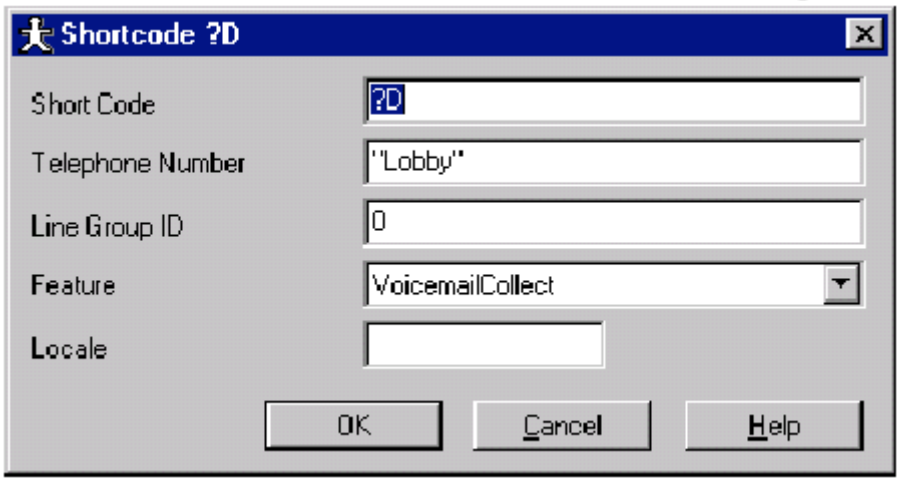
6. The **Door** tab can now be selected to display the door buttons and activate the appropriate relay.

Voice Mail Pro

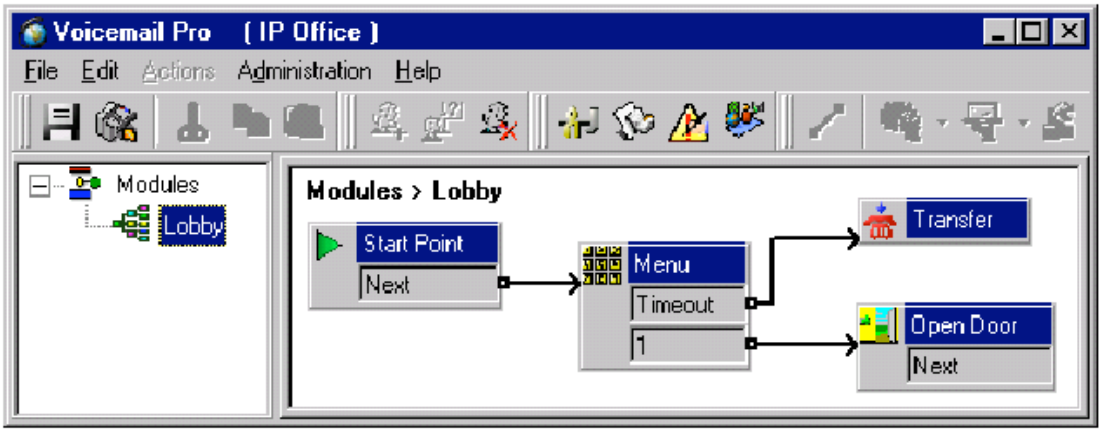
The Open Door action can be used to pulse either relay 1 or relay 2. It can be incorporated into call flows where required.
An example scenario could be a lobby phone which, when picked up immediately either calls the receptionist (who can manually activate the door release) or allows the caller to enter a code to release the door themselves.

1. In Manager, open the configuration for the **User** associated with the lobby phone. Add a shortcode similar to the following:

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2. Whenever the user extension goes off hook, this shortcode will call a Voicemail Pro module, in this example one called Lobby.
3. In Voicemail Pro add a module of the matching name.



4. In the **Menu** action's properties:
   • In the **Entry Prompts** tab record a prompt such as *"Please hold for reception"* and tick **Allow prompts to be interrupted by Tone**.
   • In the **Touch Tones** tab set a short timeout since callers who know the door access code can interrupt the entry prompt. Select a key for door access, in this example we used 1.
   • Link the **Timeout** result to a **Transfer** to the reception number.
   • Link the 1 key press result to the **Open Door** action.
5. In the **Open Door** action's properties:
   • In the **General** tab enter a **Pin** for the action. Callers who press 1 for entry will hear *"Please enter your access code"*.
   • In the **Specific** tab select the door relay that should be triggered by successful pin entry.

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