

## Answer supervision

This chapter document is designed to help explain and resolve issues of answer supervision from a switch or PSTN provider that could result in billing for termination calls.

VIP-Gateway provides 2 Types of Answer Supervision:

### 1. Loop-Start Reverse Battery:

Reverse battery (also called Polarity Reverse) is when the PSTN provider reverses the polarity of the battery voltage, for both answer supervision and disconnects supervision.

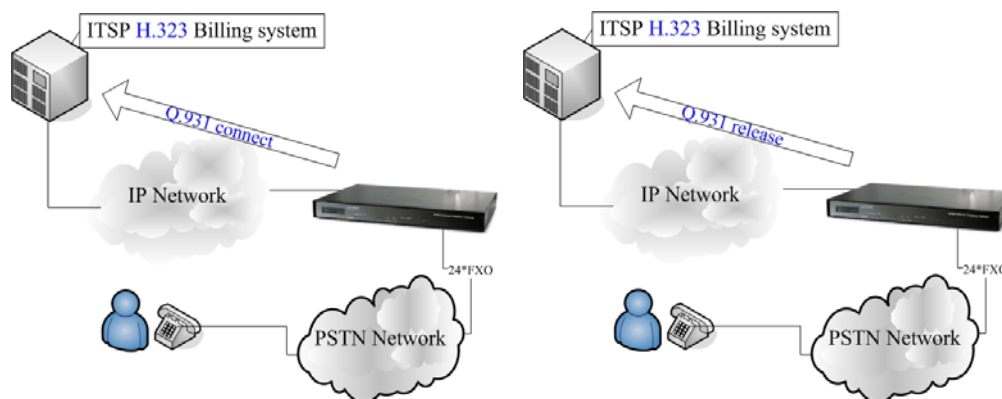
### 2. Voice Detection:

Voice Detection-based answer supervision is a feature where the Gateway can be configured to “listen” on the line for different tones and voice. The Gateway sends a “connect” signals out or “disconnect” signaling using internet.

<b>VoIP Setup</b>	
VoIP Basic	
Dialing Plan	
Advance Setting	
Hot Line Setting	
Port Status	
FXO Ringer Voltage Threshold	<input checked="" type="radio"/> Low <input type="radio"/> Medium <input type="radio"/> High
FXO Ringer Voltage Filter	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
FXS Battery Reversal Generation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
FXO Answer Supervision	<input checked="" type="radio"/> Disable <input type="radio"/> Battery Reversal Detection <input type="radio"/> Voice Detection
Line Silence Disconnect	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
FXO Answer Delay Time	0 msec(from 0 to 8000 msec)
FXO Answer Mode	<input checked="" type="radio"/> Ringing Answer <input type="radio"/> Connecting Answer <input type="radio"/> No Answer

### H.323 scenario description: Loop Start Reverse Battery → PSTN line was set polarity reverse

- The gateway can send the “Q.931 connect” H.323 signals to Billing System of ITSP, after the user pick up the Phone and detect the PSTN line answer voltage.
- The gateway can send the “Q.931 Release” H.323 signals to Billing System of ITSP, after the user hang up the Phone and detect PSTN line disconnect voltage.



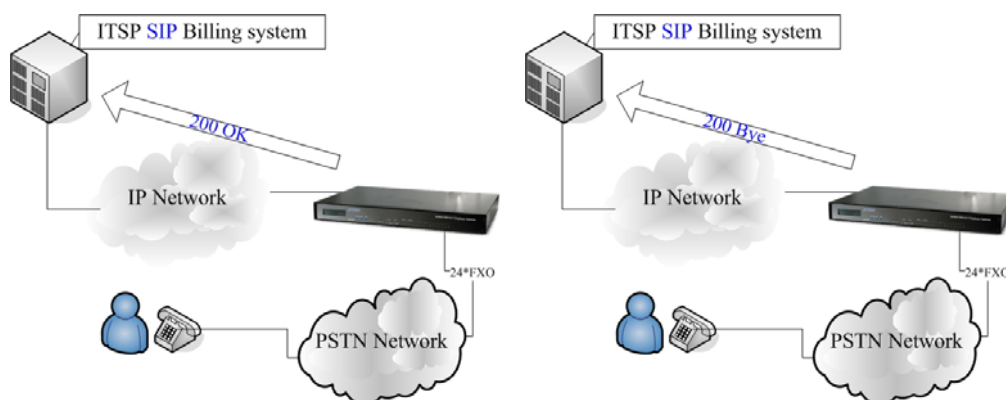
### Scenario description: Voice Detection based on answer supervision

PSTN Line was not support Polarity Reverse:

- a) The gateway can send the Q.931 connect H.323 signals to Billing System of ITSP, after the user pick up the Phone and detect the voice.
- b) The gateway can send the Q.931 Release H.323 signals to Billing System of ITSP, after the user hang up the phone and detect the hang up voice.
- c) This type of answer supervision is not 100% accurate. Any voice frequency is detected as connect, including any intercept or recorded messages.

### SIP scenario description: Loop Start Reverse Battery → PSTN line was set polarity reverse

- a) The gateway can send the "200 OK" SIP signals to Billing System of ITSP, after the user pick up the Phone and detect the PSTN line answer voltage.
- b) The gateway can send the "200 BYE" SIP signals to Billing System of ITSP, after the user hang up the Phone and detect PSTN line disconnect voltage.



### Scenario description: Voice Detection based on answer supervision

PSTN Line was not support Polarity Reverse:

- a) The gateway can send the 200 OK SIP signals to Billing system of ITSP, after the user pick up the Phone and detect the voice.
- b) The gateway can send the 200 BYE SIP signals to Billing system of ITSP, after the user hang up the phone and detect the hang up voice.
- c) This type of answer supervision is not 100% accurate. Any voice frequency is detected as connect, including any intercept or recorded messages.



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