# **VoIP Gateway Series**

# FXO Service Features (Clear-Down-Tone)





AddPac Technology

2011, Sales and Marketing

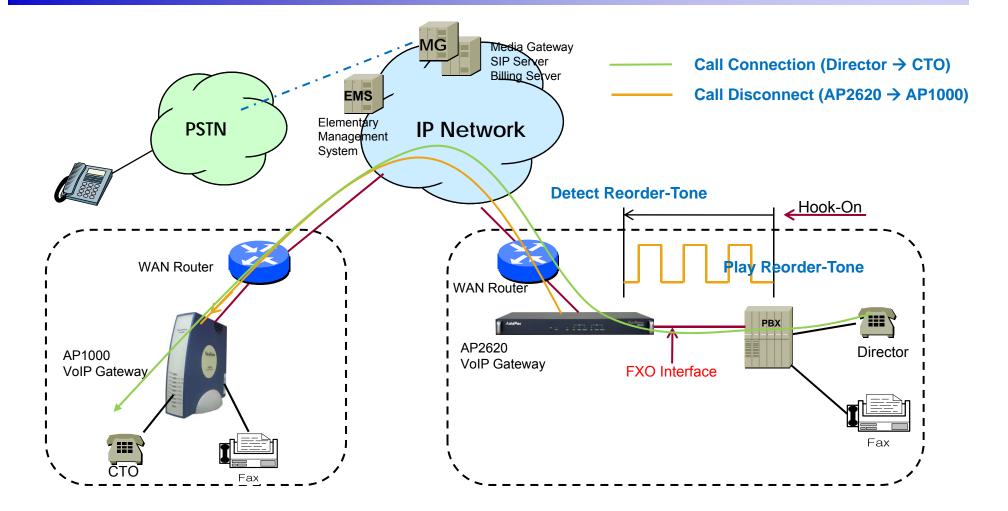
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#### **Clear-Down-Tone Detection Network Diagram**



#### **Clear-Down-Tone** Overview

- Clear-Down-Tone
  - Playing tone types for FXO call clear(disconnect) between PBX(or Keyphone) and VoIP Gateway
    - Line Busy Tone
    - Reorder Tone
    - Line Lock Tone
    - User Defined Clear Down Tone
  - If user know about tone frequency and cadence of PBX clear-downtone, AddPac VoIP gateway provide the call clear function by easy configuration via CLI

Tag Low(Hz) High(Hz) On1(ms) Off1(ms) On2(ms) Off2(ms) dBm Description

-	350	440	10000	0	0	0	-18 Dial tone
-	440	480	1000	2000	0	0	-12 RingBack tone
-	480	620	500	500	0	0	-12 LineBusy tone
-	480	620	300	200	0	0	-12 Reorder tone
-	1400	2060	100	100	0	0	0 LineLock tone



## **Clear-Down-Tone Trouble Shooting**

- Clear-Down-Tone
  - Clear-Down-Cadence
    - Usage : If FXO interface of VoIP gateway does not detect or recognize Clear-Down-Tone incoming from PBX side, VoIP Gateway can not perform Call Release procedure even though end user terminal in PBX is already hook on.

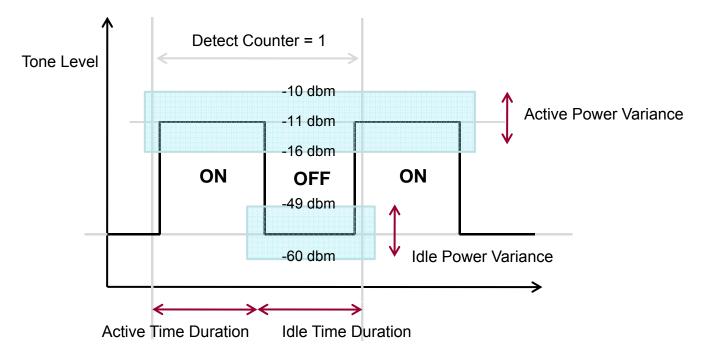
This function detect Clear-Down-Tone by tone level not frequency , and clear call pending of FXO interface.

- Force-Clear-Down

• Usage : FXO call clear using Voice Mute Detect Function.

If tone level is lower than a specific value for some time in FXO interface, perform call clear procedure.

#### **Clear-Down-Cadence Feature**

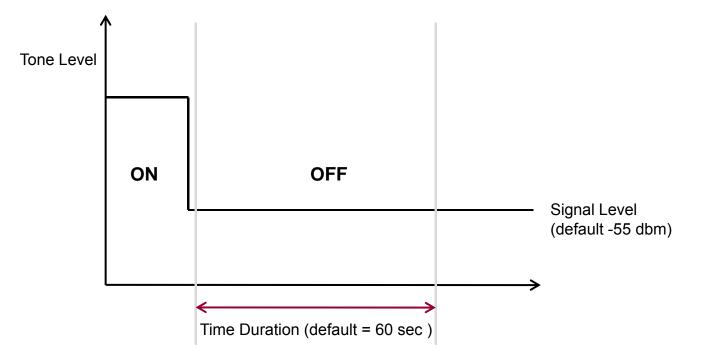


- Clear-Down-Cadence
  - Detect and analyze clear-down-tone incoming from PBX
  - Using detected clear-down-tone data, Active / Idle Time Duration and Active / Idle Power Variance information is applied to Clear-Down-Cadence parameter.
  - And then, Call Clear is possible by Clear-Down-Cadence Parameter.
  - Clear-down-cadency detection is performed more accurately using Detect Counter parameter (1,2,3, etc) for Call Clear.



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#### **Force-Clear-Down Feature**



- Force-Clear-Down
  - If FXO port call is not cleared or disconnected by Clear-Down-Tone and Clear-Down-Cadence configuration, this Force-Clear-Down function can be used.
  - If tone level is lower than a specific value for some time in FXO interface after hook on, perform call clear procedure.



# Thank you!

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