

White Paper of LAN Phone 201 H.323 version

PSTN Debug and PSTN hidden command

Part I Introduction

This document includes two important sections: one is how to use PSTN debug flag to analyze user's PSTN environment when LAN Phone 201 has erroneous PSTN incoming call detection and related LCD messages. The other is to introduce the hidden command **[pstn]** so that user can set their own PSTN parameters in LAN Phone 201 when default value can't meet their requirement.

Part II PSTN Debug Flag

1. When to use: If your LAN Phone has erroneous PSTN message on LCD, e.g., LAN Phone can't display "PSTN INCOMING" correctly when LAN Phone has PSTN incoming call.
2. Usage: Please enter debug commands on TELNET command line interface:

debug -a cpm

debug -o

After user enters commands above, please make a PSTN call, and let LAN Phone rings for a period of time, on Telnet screen will display related debug messages. Here is an example:

```
1.000:DRV --> EV_PSTN_RING(SilenceCnt:62 ,PulseCnt:50 )
0.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:68 ,PulseCnt:50 )
4.000:DRV --> EV_PSTN_RING(SilenceCnt:858 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
4.000:DRV --> EV_PSTN_RING(SilenceCnt:861 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:65 ,PulseCnt:50 )
0.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
4.000:DRV --> EV_PSTN_RING(SilenceCnt:858 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:68 ,PulseCnt:50 )
1.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50 )
```

4.000:DRV --> EV_PSTN_RING(SilenceCnt:860 ,PulseCnt:50)

1.000:DRV --> EV_PSTN_RING(SilenceCnt:66 ,PulseCnt:50)

User can see there are many values in each cycle of Rings, please read the maximum value of each cycle (marked with red color). In this case the value is about 858-861, we will suggest user to set silence value to be 900-1000. Please refer to ***pstn –silence*** command in next part.

Part III [***pstn***] command

Every 5 ms LAN Phone will detect PSTN signal, so the value input in command represents real time length (ms) ÷ 5.

Default Values:

usr/config\$ pstn -print

Pulse Sample :50 = (250 ms)

Pulse Maximum :500 = (2500 ms)

Silence Sample :900 = (4500 ms)

Auto Detect Signal :ON

Silence Signal :Lo

Initial Detect Time :800= (4000 ms)

1. **Pulse Sample:** Default value is 50 = 250ms.

pstn -pulse “value”

If user set pulse value as 50, which means when LAN Phone detected 50 times with Ring signal, it will determine that LAN Phone has incoming call and display “PSTN INCOMING” message on LCD.

The less the value is, LAN Phone will be more sensitive about PSTN incoming call detection, however, if LAN Phone has big electric noise, it will also more easy to be determined noise as Ring signal erroneously.

2. **Pulse Maximum:** Default value is 500 = 2500ms.

pstn -pulsemax “value”

This is to prevent wrong determination of Ring signal. If LAN Phone detected 500 times (2500ms) of Ring signal, this value is obviously not reasonable, which means the detection is not correct, and LAN Phone will automatically rerun PSTN detection program and reset Auto Detect Signal (please refer to item 5 ***pstn -signal***).

We will suggest user to set:

“value = Ring time length(ms)÷5 + 500”.

3. **Silence Sample:** Default value is 900 = 4500ms

pstn -silence "value"

This is to set silence time length for LAN Phone to determine if there is no more PSTN incoming call. When LAN Phone has PSTN incoming call, and PSTN user cancel this call, after LAN Phone detect 900 times (4500ms) without Ring signal, on LCD will stop displaying "PSTN IMCOMING" and return to standby mode.

If user set this value too short, PSTN related messages displayed on LCD will be not smoothly, if user set this value too long, LAN Phone will took more time to return standby mode.

We suggest user to set:

"value = silence time(ms) ÷ 5 +100 (to 200), or detected value +100 (to 200)". (Please refer to Part II for detail debug command of detected silence value)

4. **Auto Detect Signal:** Default value is ON.

pstn -autodet "0/1" (0:OFF/1:ON)

This is to enable or disable auto detection function. If this function is enabled, LAN Phone will auto detect PSTN signal type while initializing. We strongly suggest user to enable this function.

5. **Silence Signal:** LAN Phone will detect Hardware type while initializing. Default value depends on different version of Hardware.

pstn -signal (0:Lo/1:Hi)

For Hardware version below 1.4, please set it as Hi, for Hardware version 1.4 or above, please set it as Lo. If user cannot be sure about the Hardware version, please don't set this value since LAN Phone will auto detect PSTN signal if item 4 is enabled.

6. **Initial Detect Time:** Default value is 800= 4000ms

pstn -times "value"

This is to set the length of auto-detection time when LAN Phone is initializing. If user set this value too short, there may be not enough time for LAN Phone to detect correct Hardware type, if user set this value too long, it will increase initializing time of LAN Phone.

We suggest user to set:

"value = (Ring time (ms)+ Silence time (ms)) × 2 ÷ 3"