How to check cover area using PS

(KX-UDS/UDT series)

No. 41-003

August 21 , 2012

Ver.1.0

Panasonic Corporation

Abstract about this document

This document describes about how to check cover area using PS.

Revision history

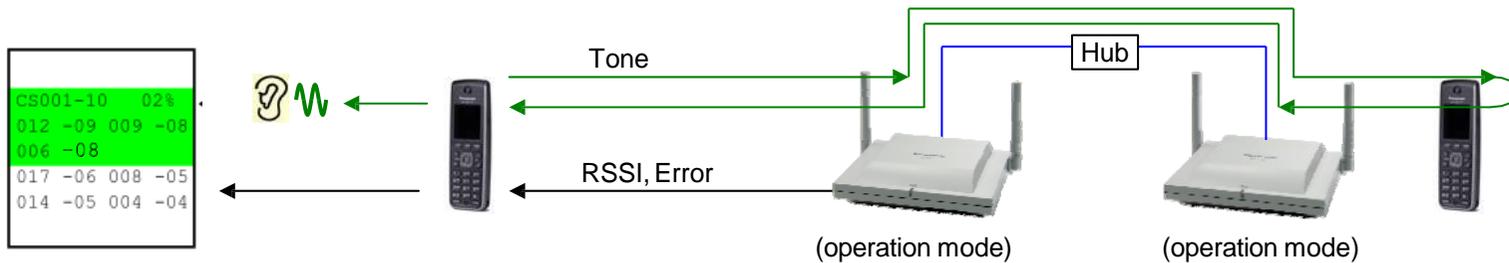| Date	Version	Revision	Firmware version
Aug 21, 2012	Ver. 1.0	Initial Release	All versions

1.Outline

2.How to enter "Maintenance mode" of the PS

1.Outline

We can use these three modes for checking the coverage area by using PS.

(1) CS area check : at Site survey mode

```
CS-ID: 9005301234
RSSI:10
Error Rate:01%
```

Tone

RSSI, Error

(Site survey master mode)

(2) PS area check : at Operation mode (Talk)

```
CS001-10    02%
012 -09 009 -08
006 -08
017 -06 008 -05
014 -05 004 -04
```

Tone

Hub

RSSI, Error

(operation mode)   (operation mode)

1. Outline

The difference between two modes for checking the coverage area by using PS.

PS maintenance Mode	Check timing		Check item				Monitored CS	
	Situation	PS status	RSSI	Error	Sound	Hand over	Current Sync CS	Detected CS
(1)CS Area Check (for coverage area check of a CS)	Site Survey	-	Yes	Yes	Tone (with a PS)	No	Yes	No
(2)PS Area Check (for coverage area check of a system)	Operation	Talk	Yes	Yes	Tone (with 2 PS)	Yes	Yes	Yes

2.How to enter "Maintenance mode" of the PS

We have to setup PS to "Maintenance mode" for using each menu in it.
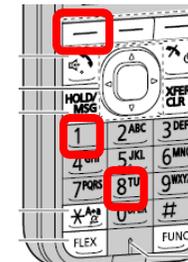
1. Turn on the PS by pressing and holding
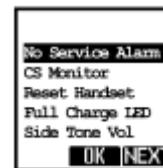   the POWER/CANCEL key.

2. After turning on the SIP-PS, a blank screen will be displayed.
   At this time, press and hold the TALK/SP-PHONE key
   for about 8 seconds.

3. Press the left soft key, press [8], and then press [1].

Maintenance Mode
Ver01.01.003

OK

4. Press OK.
   The main menu of the "Maintenance mode" will be displayed.
   Then we can select each PS Mode
   (CS Area Check, PS Area Check, etc).

No Service Alarm
CS Monitor
Reset Handset
Full Charge LED
Side Tone Vol
OK NEXT

Note:
   1) To exit the "Maintenance Mode", please turn off the PS.
   (Pressing and holding the POWER/CANCEL key for few seconds)
   2) Don't select the menu except "CS Area Check" and "PS Area Check", or PS setting may be
      changed or cleared.

3. CS Area Check

What can we check by CS Area Check?

1. RSSI and Error Rate

RSSI (Radio Signal Strength Indication) and Error Rate from a CS to PS are displayed on the LCD of PS.

Background color of both RSSI and Error Rate indication area becomes green when these qualities become good.

RSSI		Error Rate	
Value	Quality	Value	Quality
13 to 17	Very Good	0%	Better
8 to 12	Good	2%	Good
4 to 7	May receive noise	3%	May receive noise
Under 3	May receive noise easily or become disconnected.	10%	May fail to make/receive calls

2. Tone Sound

We can check Sending and Receiving sound condition at same time using this mode.
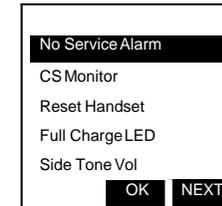PS sends Tone sound to CS. And CS returns Tone to PS.
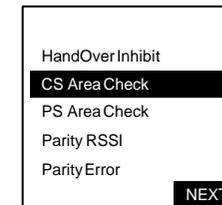We can check the sound quality alone by this function.

CS-ID: 9005301234
RSSI:10
Error Rate:01%

2.Tone

1.RSSI, Error
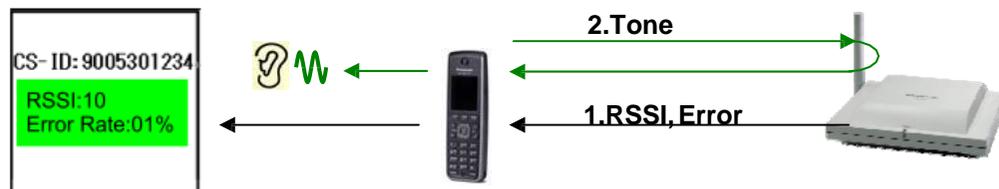
3. CS Area Check

How to enter "CS Area Check" mode.

1. Enter "Maintenance Mode" and Press "OK" according to Page.5.

No Service Alarm
CS Monitor
Reset Handset
Full Charge LED
Side Tone Vol
OK   NEXT

2. Select "CS Area Check" and Press "OK".

HandOver Inhibit
CS Area Check
PS Area Check
Parity RSSI
Parity Error
NEXT

3. Press "OK" again.
   (To exit this menu, press "POWER/CANCEL" key)
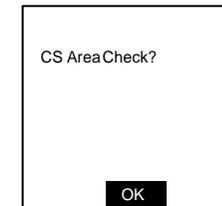
CS Area Check?
OK

4. PS starts to search the CS which is site survey master.
   (To exit this menu, press "POWER/CANCEL" key)
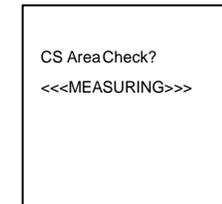
CS Area Check?
<<<MEASURING>>>

5. PS shows RSSI and Error rate after it synchronizes the CS.
   (To exit this menu, press "POWER/CANCEL" key)

CS-ID:123456789
RSSI:10
Error Rate:00%
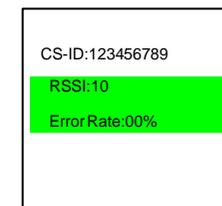
When do we use this mode?

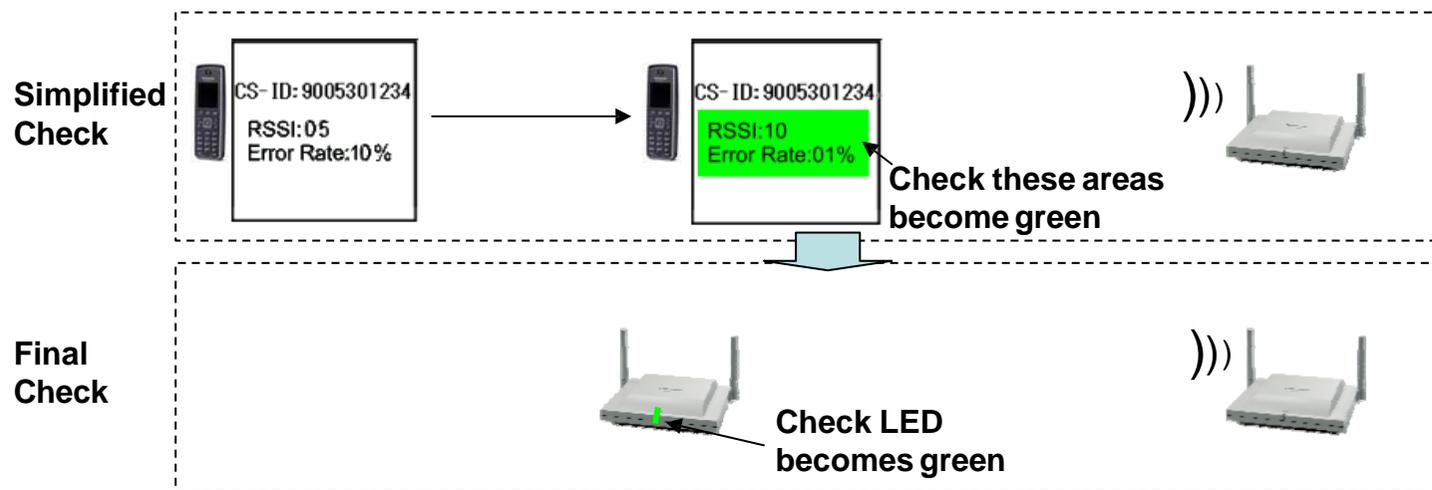**RF coverage area check for one CS at site survey stage**

We can check RF coverage area of each CS (Site survey master CS) by not only RSSI and Error rate monitor but also hearing tone.

Installer can easily understand the accurate coverage area by hearing the tone.

(For example, Installer can hear the noise if there is any RF interference, etc)

<TIP>

"CS area check" mode may be used as simplified check to find the position of slave CS which receives air synchronization signal from other CS. The criteria which change background color of RSSI and Error Rate monitor on PS to green are similar with the one which changes LED to green on CS. But this is the absolutely simplified check and please confirm whether the CS can synchronize with other CS by CS's LED finally, because CS position and its antenna direction affects RSSI and Error rate.

Simplified Check

CS-ID: 9005301234
RSSI: 05
Error Rate: 10%

CS-ID: 9005301234
RSSI: 10
Error Rate: 01%

Check these areas become green

Final Check

Check LED becomes green
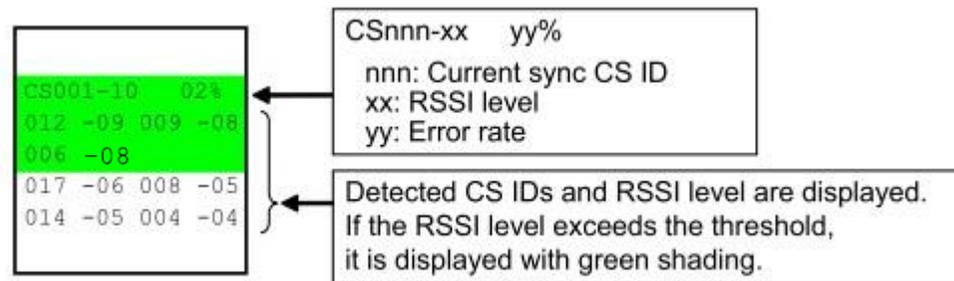
4. PS Area Check

4. PS Area Check

What can we check by PS Area Check?

1. RSSI and Error Rate

CS Number, RSSI (Radio Signal Strength Indication) and Error Rate from synchronized CS to PS are displayed on the LCD of PS. CS number and RSSI from other detected CSs are also displayed.

Background color of both RSSI and Error Rate indication area becomes green when these quality becomes good.

```
CS001-10    02%
012 -09 009 -08
006 -08
017 -06 008 -05
014 -05 004 -04
```

CSnnn-xx   yy%

nnn: Current sync CS ID
xx: RSSI level
yy: Error rate

Detected CS IDs and RSSI level are displayed.
If the RSSI level exceeds the threshold,
it is displayed with green shading.

Threshold is same as the one for "CS Area Check". Please refer to Page.8

2. Tone Sound

We can check Sending and Receiving sound condition at same time using this mode.
One PS sends Tone sound to another PS. And another PS returns Tone.
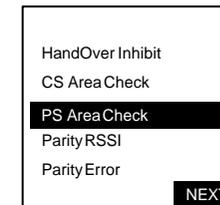We can check the sound quality alone in whole system by this function.

```
CS001-10    02%
012 -09 009 -08
006 -08
017 -06 008 -05
014 -05 004 -04
```

Tone

Hub

RSSI, Error
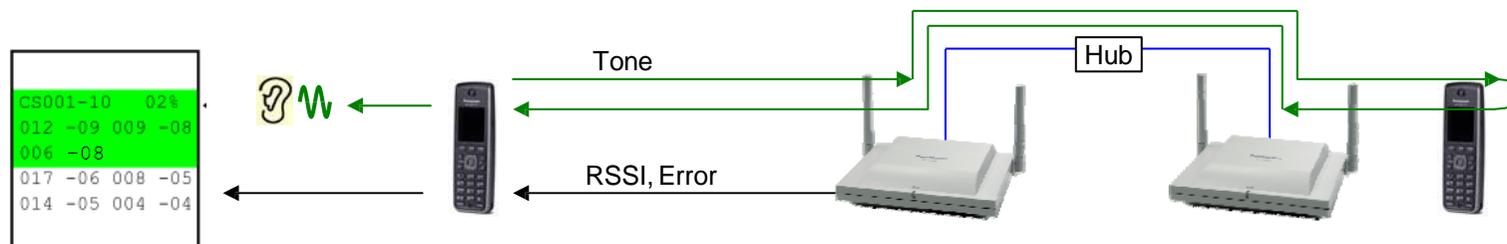
4. PS Area Check

How to enter "PS Area Check" mode.

1. Enter "Maintenance Mode" and Press "OK" according to Page.5.

No Service Alarm
CS Monitor
Reset Handset
Full Charge LED
Side Tone Vol
OK   NEXT
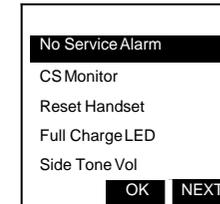
2. Select "PS Area Check" and Press "OK".

HandOver Inhibit
CS Area Check
PS Area Check
Parity RSSI
Parity Error
NEXT

3. Select "On" and Press "OK".
   (To exit this menu, press "POWER/CANCEL" key)

PS Area Check
On
Off
OK
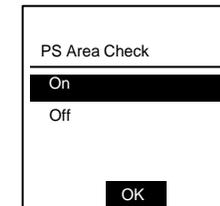
4. Turn OFF the PS by pressing and holding the POWER/CANCEL key.

   "PS Area Check" is valid after PS is turned ON again.

Note:
   To exit this mode, select "Off" and Press "OK" at step 3.

When do we use this mode?

RF coverage area check for system after tree survey.

Two PSs, which set in "PS Area Check" mode, are used for coverage area check.
We can check RF coverage area of whole system by not only RSSI and Error rate monitor but also hearing tone after making call between two PSs.
Installer can easily understand the accurate coverage area by hearing the tone.
(For example, Installer can hear the noise if there is any RF interference, etc)
Handover can be also checked.

PoE SW Hub

PS1

PS2
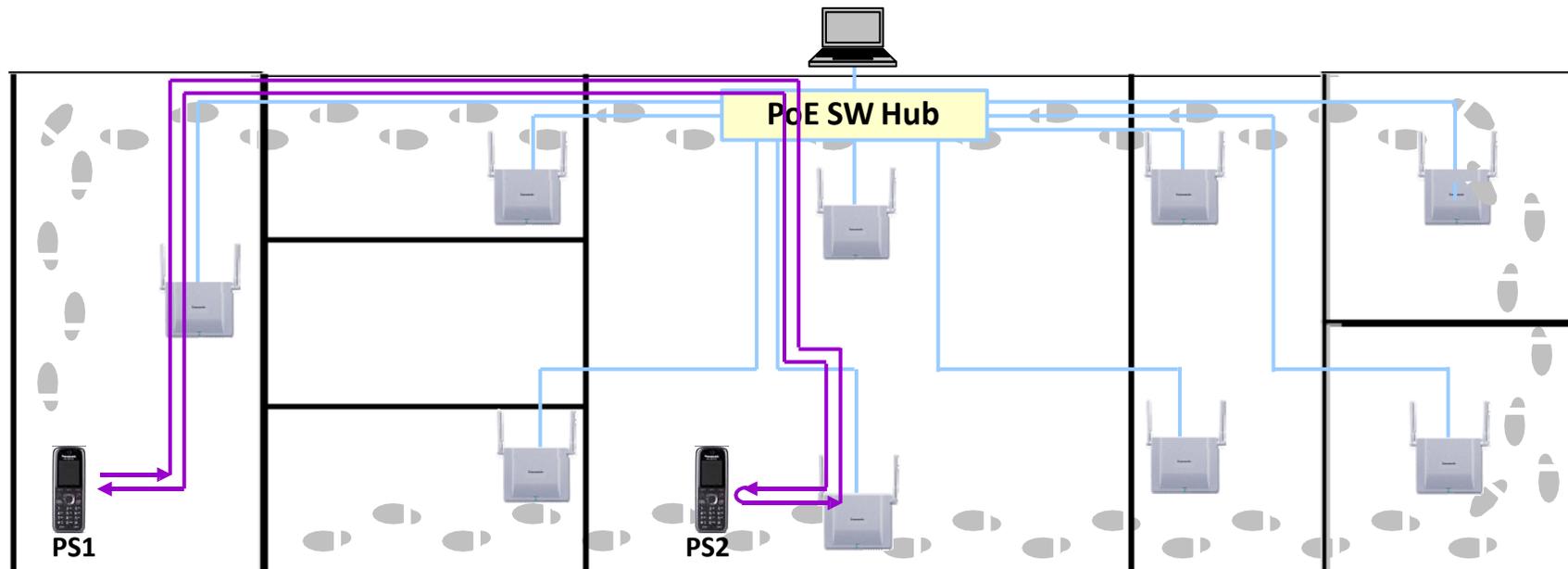
PS1 makes a call, then it send inside tone to TX side.

PS2 receives a call, it loopback from RX to TX directly