

# **SANYO**

## **PHS Cell Station**



**- User's Manual -**

March 19, 2004

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# Installation conditions



## ■ Place

- CS shall be installed in the place where the public can not easily access.
- Installation place shall have the structure which can support the weight of CS and its fixing facilities.
- Installation place shall be flat with no inclination.
- If CS is installed in the place where it may drop down, it shall be provided with protective measure against the drop.
- There shall be no object around 2m of CS.
- For the maintenance use, there shall be the space in about 500mm around the stand.
- CS shall be installed in the direction that the logo plate appears upwards. CS can be placed in vertical direction with arranging the fixing metal.

# Installation conditions



## ■ Antenna

- With fixing antennas, there shall be enough viewing angle from CS. (Target angle: vertical: 30 degree or more, horizontal: 330 degree or more)

## ■ ISDN Line

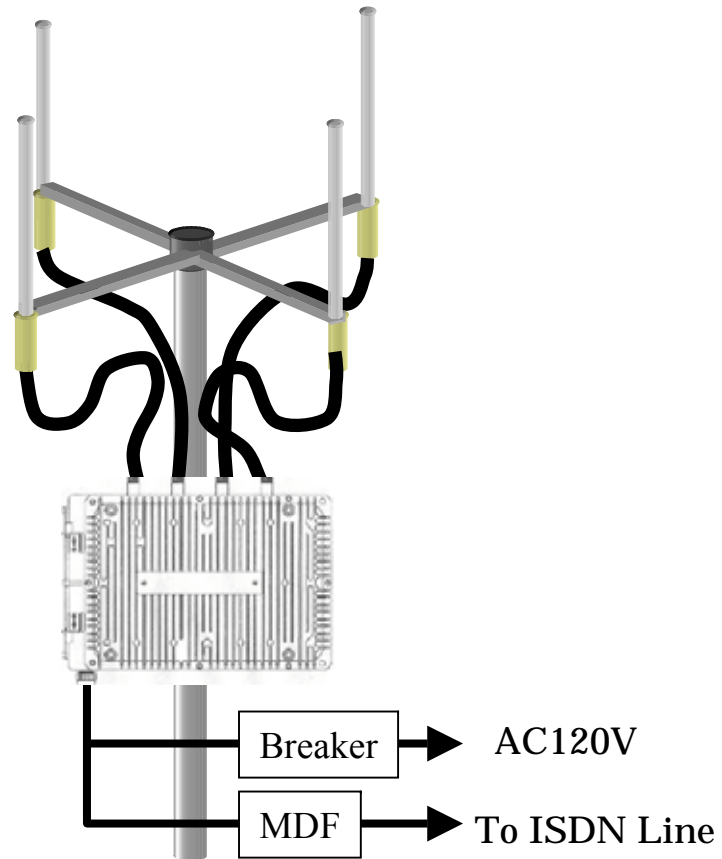
- Interconnection box for ISDN line shall be available near the CS.
- ISDN line length from the exchange to CS and its quality shall comply with the technical standard (ANSI T1.601-1992).

## ■ Power supply

- AC120V shall be available with easy wiring connection work.

# Fixing antenna for PBS-CS100

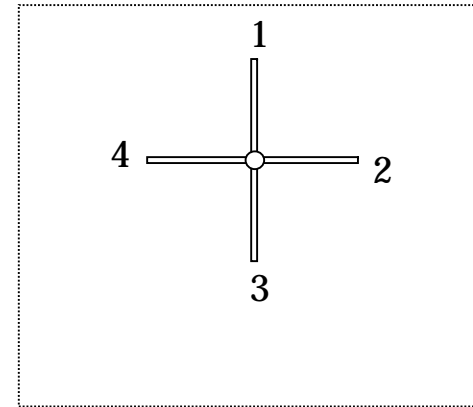
PBS-CS100



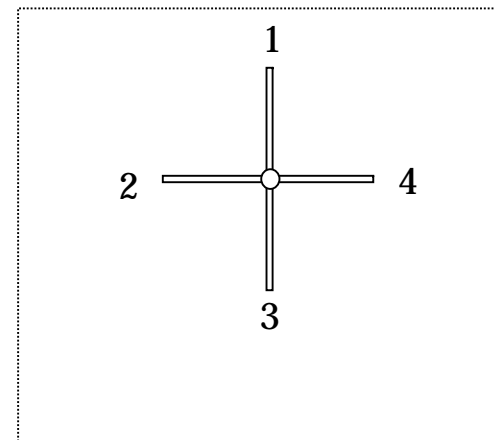
# Condition of the antenna cable (PBS-CS100)

- Numbering arrangement
  - Numbering arrangement of 1 - 4 shall be made clockwise or counterclockwise.
- Tightening torque of the antenna cable:  
7 - 12 Kgf-cm.
- Wind the self-bonding tape between the antenna connector and the end of cable.

Case of Clockwise



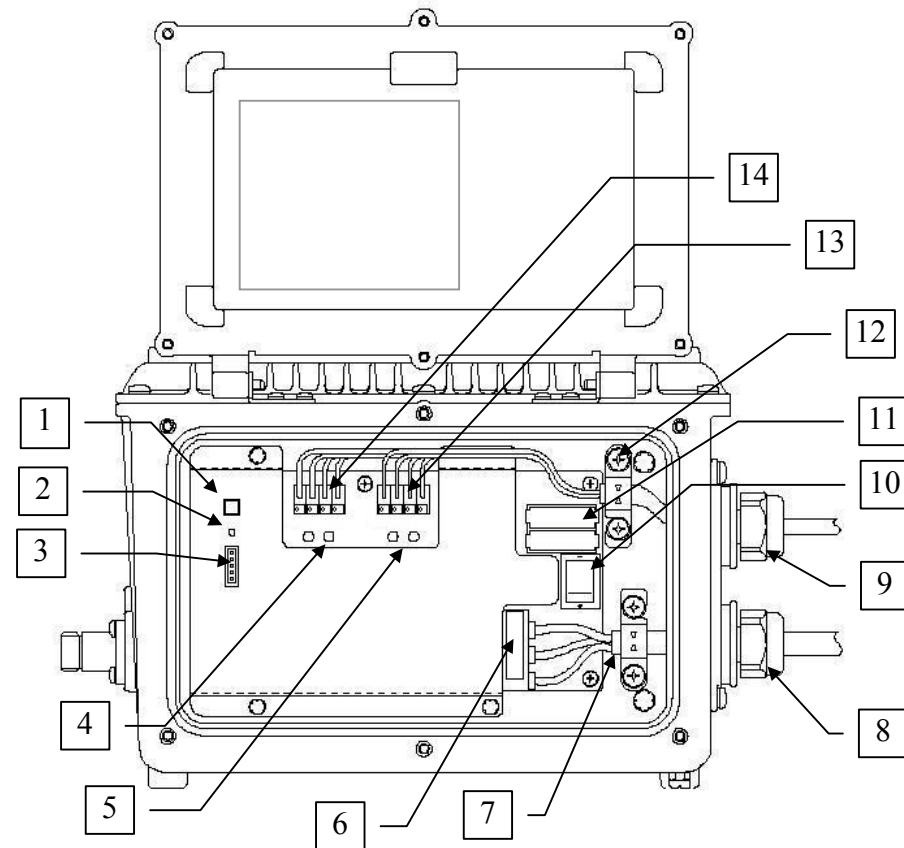
Case of Counterclockwise



# Terminal block appearance(PBS-CS100)

Terminal block of the power supply and line's connections are shown below

- 1: Status indications LED
- 2: Reset Switch
- 3: Maintenance terminal connector
- 4,5: Line Status LED
- 6: Power supply Terminal
- 7: Earth clamp for Power cable
- 8: Cable gland for power cable
- 9: Cable gland for Line cable
- 10: Power supply switch
- 11: Fuse
- 12: Earth clamp for Line cable
- 13,14: Line terminal connector



# Notes at the time of lid opening and closing

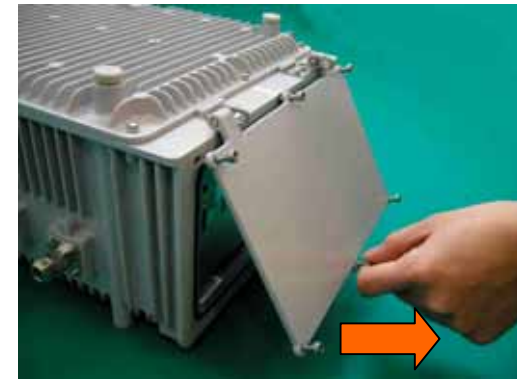
## Opening

- After loosening all lid's fixation screws completely, pull lower part and central screw of the lid, and slide. **(Photo1)**
- Confirm that all screws are free completely and two pins of the lid is at the right edge of two metal fittings, therefore rotate the lid while pulling in the direction "an arrow" like below. **(Photo2)**

## Closing

- Tightening torque of Cap screw: 10 - 15 Kgf-cm
- Tighten with M4 hexagon Socket Cap screws. (Cap screw).
- Tighten 6 screws equally and well balanced, after confirming that the waterproof packing is nonexistent between the lid and the CS.

**[Caution1]** If the clamp face or waterproof packing is scarred by screw's cusp, the waterproof performance may not be obtained.



**(Photo1)**

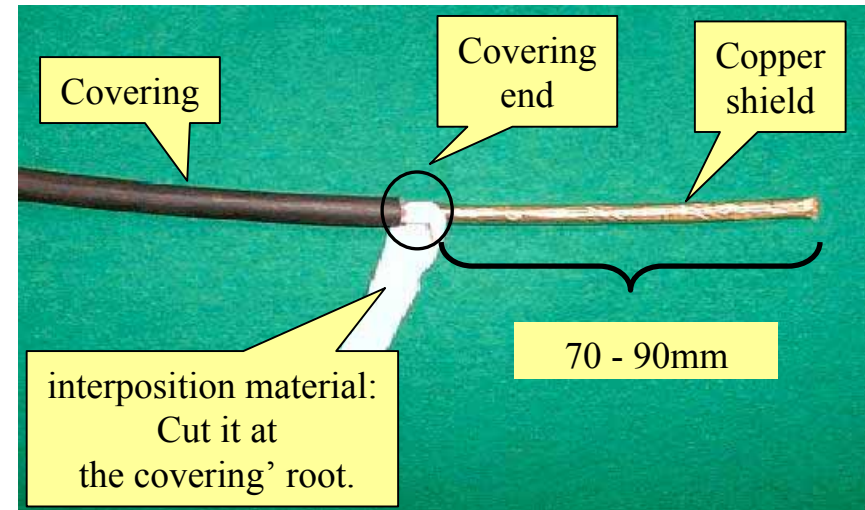


**(Photo2)**

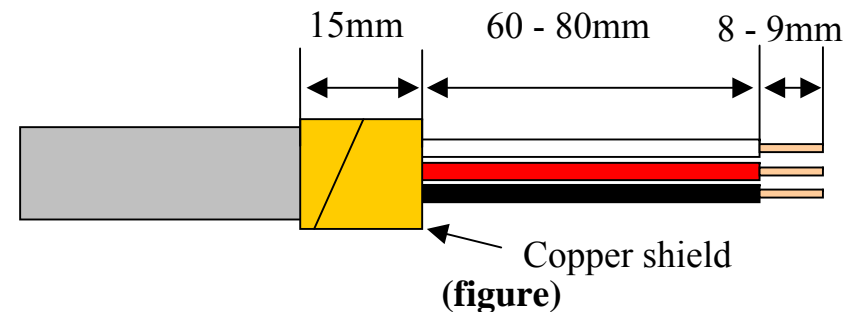


# Connection of the power cable (1)

- 1) Reeve the cable from the cable gland nut into the lid.
- 2) Pull the cable out to enough length that the tip of the cable can be processed.
- 3) Peel the covering of the cable. (Photo 3)
- 4) Peeling off core line.
- 5) Loosen the copper shield and wind it onto the core wire's tip 4 turns or more.



(Photo3)



\*The cable color is generally used in Japan, and it used in U.S.A. shall comply with the local specifications.

## Connection of the power cable (2)

6) Turn the Power supply switch off.(Photo4)

- Push the power supply switch at "○"side to turn it off.
- [Caution] When pushing the power switch at "-" side, CS is turned on.



(photo4)

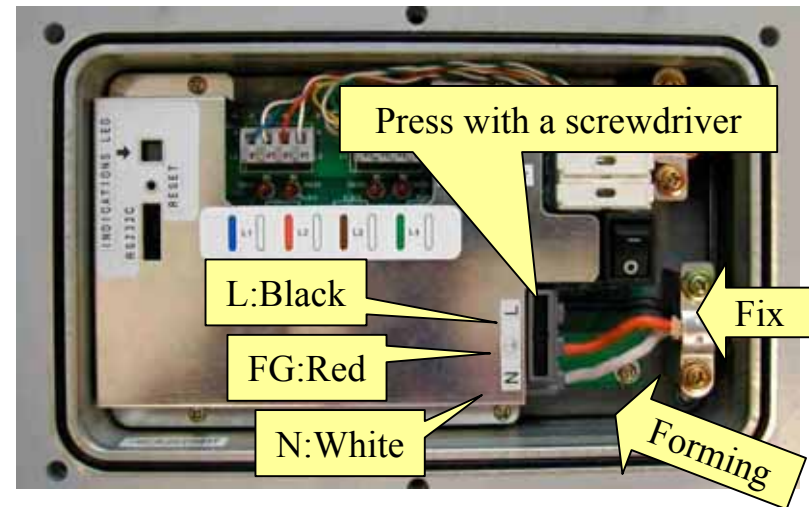
## Connection of the power cable (3)

### 7) Feazings processing of the core line.

- Pressing the black portion of the connector with a minus screwdriver( $\varphi 6$ ) or a plus screwdriver( $\varphi 4$ ), insert a core wire.
- L (Loading), N (Neutral), FG (Frame Ground).

### 8) Combine the copper shield to the position “FIX” of Photo 5. And tighten the cable gland firmly.

- [Caution]**If the fixation of the terminal block's lid is imperfect, it is feared that this CS gives hindrance to other electric devices.



(photo5)

### 9) Form core wires that are inserted into the power supply terminal.

### 10) The tightening of the dome nut must be done by hand without fail and tighten it strongly.

### 11) Wind the self-bonding tape between the surface of dome nut and the end of cable.

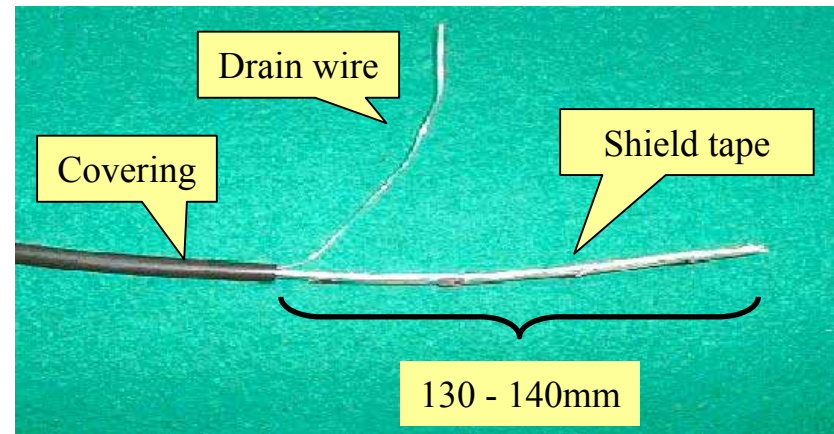
# Connection of the line cable (1)

- 1) Reeve the cable from the dome nut into the lid.
- 2) Pull the line cable out to enough length that the tip of the cable can be processed.
- 3) Peeling off the line cable covering.

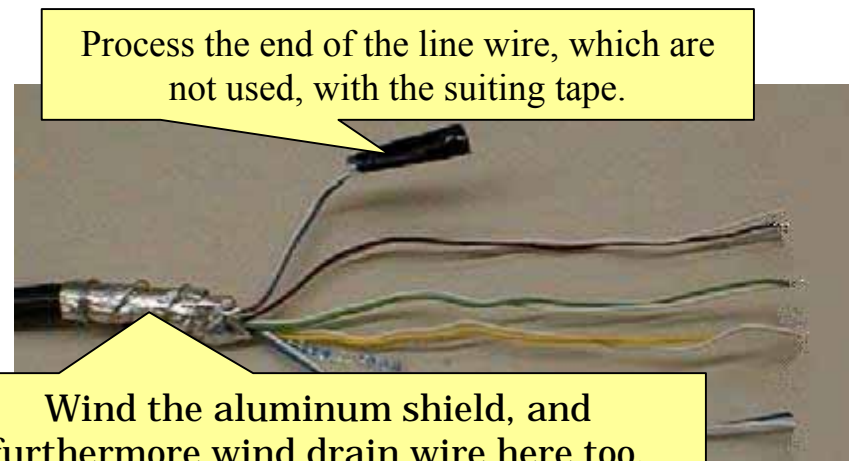
(Photo 6)

- Peel off the covering of the line cable. The length of the line cable is 100 - 120 mm. (Photo 6)

- 4) Loosen the shield and wind it on the heart line of covering 4 turns or more. (Photo 7)



(photo6)



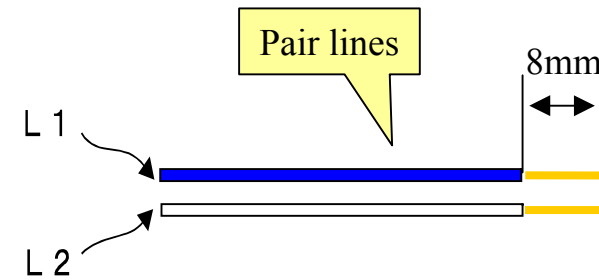
(photo7)

## Connection of the line cable (2)

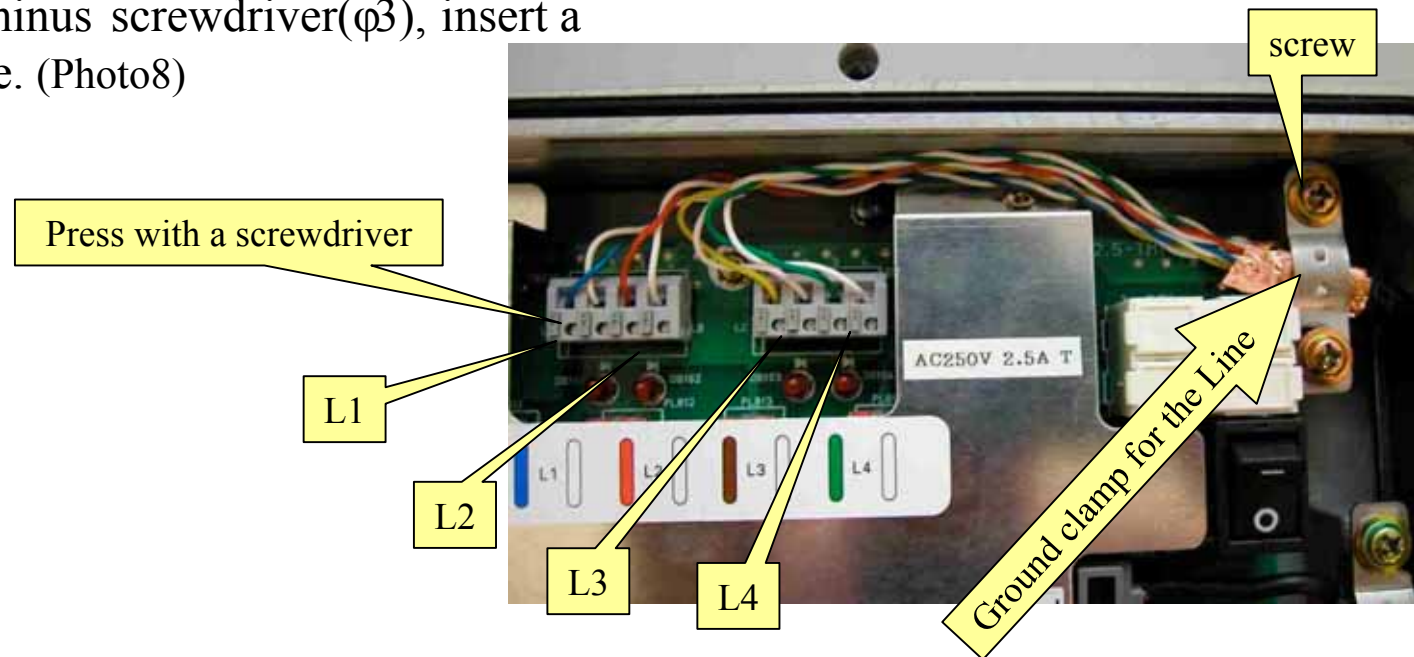
5) Loosen these four pair lines, peel off core lines.(Figure)

6) Feazings processing of the core line.

- Pressing the button of the connector with a minus screwdriver( $\phi 3$ ), insert a core wire. (Photo8)



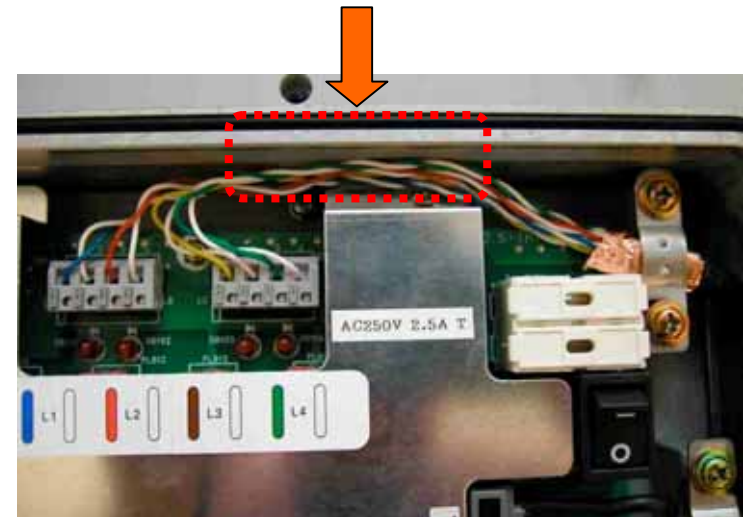
(Figure)



(photo8)

## Connection of the line cable (3)

- 7) Form core wires that are inserted into the line connector.
  - Form the line cable as not touching on the block. (Photo 9)
  - Pay attention that the line cable does not touch on the packing .
- 8) Tighten the dome nut.
- 9) Wind the self-bonding tape between the surface of dome nut and the end of cable.



(photo9)

# Concerning the installation of cables



- Ground earth terminal of the power cable securely

In case that ground does not executed, there is the possibility that destroys the CS. Because the surge protection by the ground wire can not perform.

- The earthing less than 10ohm (Class A) is desirable.

There is the possibility that the obstacle occurs to sounds and pictures of other radio devices, when the earthing resistance becomes high.

- Separation distance between cables

Distance (generally 20 cm or more) shall be kept between the line cable and the power cable for secure installation.

- The shield processing of the cable (maintenance box & breaker box)

Earthing must be executed as for the breaker box.

- Installation of lightning facility

Specifications of the CS do not specify the requirement for the installation of lightning conductor. Don't connect the lightning cable to FG of the power supply.

# **WARNING!**

## **FCC RF EXPOSURE COMPLIANCE**



- To satisfy the FCC RF exposure requirement, a minimum separation distance of 0.65m must be maintained between the nearby person and radiating elements.
- Unauthorized alteration, modifications or attachments could impair its quality, damage the cell station, or result in violation of FCC regulations.



# Appendix1:Installation materials (for example)

<b><u>Materials</u></b>	<b><u>Quantity</u></b>
	<b>PBS-CS100</b>
Antenna	4
Coaxial cable	4
Power supply cable	1
Line cable	2pair
Stand	1set
Antenna pole	1
Antenna Arm	4
Arm fixing block	1
Self-bonding tape	as adequate
Tie band	as adequate

## Appendix2:Cable specifications

<b>Kinds</b>	<b>Usage</b>	<b>Specifications</b>	<b>Remarks</b>
Coaxial cable	Antenna - PHS cell station	8D-SFA (connector with one-side N style (P)) MAX: 6m	Accessory of the antenna
Power cable	PHS cell station - power supply breaker box	With the 2.0mm <sup>2</sup> , 3 cores with the copper shield tape Outsize diameter : 8.5 – 13.5 ∅ Framerestisting: PE cable The color is designated. (black, white, green and red)	Power cable the equivalent to the existing cell station
Line cable	Cell station - Maintenance box	Single line: ∅ 1.0mm-4 pairs A category 4 or more with aluminum or copper shield tape (Shield material 0.05t over) Outsize diameter : 5 – 10 ∅ Flame resisting: PE cable	Line cable The equivalent to the existing cell station