

**Please read this
document carefully
before installation!**

Signal Line Power ADSL Loop Extender

AER800-1PL & AEC-B1PL

Installation Manual

Version: 1.0

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Preface

This manual is bringing to you that how to use this product. To the best use of the product, read this manual thoroughly before use and keep this manual handy for ease of reference.

- The contents of this document may be updated in the future, without prior notice.
- This booklet was created with thorough attention to the content. If, however, you have any question, spot an error, or find a description lacking, please contact us according to the information in the bottom of the booklet.
- We reserved all rights of brand names and trademarks.

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1.Unpack

Unpack equipment carefully; check for completeness against the purchase order.

Notify supplier if items are missing.

Note: Please keep the packing material. All equipment returned must be packed in the original packing material.

Inspect equipment for shipping damage, including bent or loose hardware, and broken connectors.

If equipment was damaged in transit, please contact supplier.

Product list

- AER800-1PL, one
- AEC-B1PL, one
- Installation manual, one

2.Technical Features

Table 1 – Technical Specifications of AER800-1PL

Input Voltage	Powered by power supply AEC-B1PL	
Power Consumption	1.5W	
Operating Environment	Temperature	-40°C ~ +60°C
	Relative Humidity	5% ~ 95% (Non-condensing)
Number of supported users	1 ADSL subscriber	

Table 2 - Technical Specifications of AEC-B1PL

Operating Environment	Temperature	-10°C ~ +50°C
	Relative Humidity	5% ~ 95% (Non-condensing)

Input Voltage	DC 48V
Output Voltage	DC 155V
Output Current	Less than 50mA

3.Installation Environment

3.1 The actual lines connecting of equipment

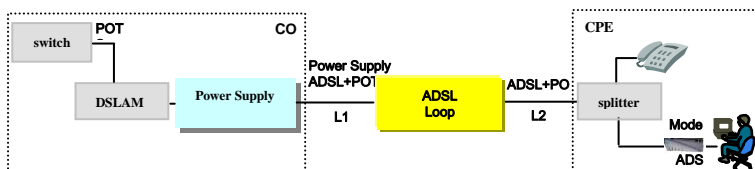


Figure 1 Actual lines connecting

L1: The signal twist pair connecting power supply to Extender

L2: The signal twist pair connecting ADSL Loop Extender to Modem.

3.2 Ensure the upstream/downstream rate is no less than 128kbps/512kbps.

3.3 Resistance and distance demand

The recommended installation conditions are as follows.

①26 AWG twist pair

The demand about resistance and distance is as follows:

Route	Loop resistance demand Ohms (Min.-Max.)	distance demand (Min.-Max.)	
		kfeet	km
L1(CO-ALE)	450-1260	5.0-13.0	1.5-4.0
L2(ALE-CPE)	200-900	2.0-9.5	0.5-3.0

L(CO-ALE-CPE)	800-2000	6.5-22.5	2.0-6.0
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②24 AWG twist pair

The demand about resistance and distance is as follows:

Route	Loop resistance demand Ohms (Min.-Max.)	distance demand (Min.-Max.)	
		kfeet	km
L1(CO-ALE)	270-1050	5.0-20.0	1.5-6.0
L2(ALE-CPE)	170-1050	3.0-20.0	0.9-6.0
L(CO-ALE-CPE)	550-1550	10.0-29.0	3.0-7.2

If the loop resistance between Extender and Modem is lower than the demand value, the LA800 which you could choose and buy from our company can be added to increase loop resistance. The option LA800 is to be installed between splitter and Modem when used on a line with analog voice. Here is the application of LA800 below:

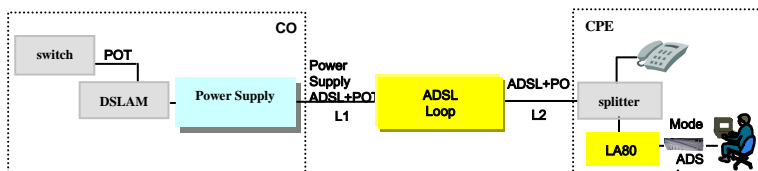


Figure 2 the Application of LA800

4. Installation Steps

The AER800-1PL is deployed with AEC-B1PL. Commonly, the ADSL Loop Extender is installed in the junction cabinet, or on the pole at the middle locality, the power supply is installed at CO. The details about ADSL Loop Extender and

Power Supply installation are as follows.

4.1 Install the power supply (AEC-B1PL)

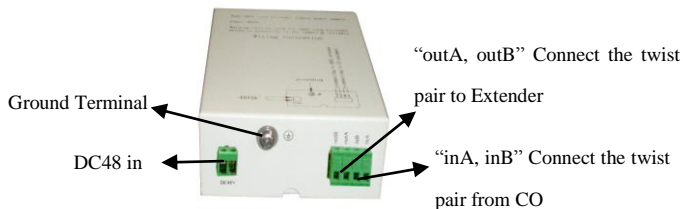


Figure3 Picture of AEC-B1PL back panel



Figure4 Picture of AEC-B1PL front panel

- ✓ Power: Power indicator.
- ✓ OFF-HOOK: when the telephone is picking, the light will be on.
- ✓ Sequence: If the light is on that line sequence inputted incorrectly, please exchange “inA, inB” line sequence, to input correctly, the light will be off.

- 1) Connect the power cord of DC48V:
- 2) The supplied accessories include power cord for DC -48V. Connect it to the DC -48V power source with good connection.
- 3) Connect the twist pair from DSLAM/Switch:

No additional copper pair is required for power. Choose the signal line from

the DSLAM/Switch, connect it to the “inA, inB” terminal of AEC-C1PL.

Notice: Do not connect the cable of the DSLAM /Switch to the “outA, outB” terminal, or else, the equipment would be damaged.

- 4) Connect the twist pair to the Extender:

Choose the signal line linked to the Extender, connect it to “outA, outB” terminal of AEC-C1PL.

Notice: Do not connect the cable of the junction cabinet to the “inA, inB” terminal, or else, the equipment would be damaged.

- 5) Connect the ground cable:

Copper-core wire with no less than 2.5mm^2 section area is required as ground wire. One end of the wire should connect to Power Supply’s ground terminal. The other end of the wire should connect to a good grounding point. (Suggestion: grounding resistance is less than 5Ω).

After the installation completion, press DC48V power switch, power indicator light turn green, said that normal power supply , At the same time, observe whether the line sequence indicator (red) is always lighted. If always light, exchange the line sequence till the indicator out. The normal operation status of the indicator is extinct.

Table 3- the Description of the buttons, indicators and outlets

Buttons, Indicators and Outlets			description
J	A1	B1	Signal line input
	A2	B2	Signal and Power supply output
Power			Power indicator

OFF-HOOK	The status of telephone indicator
Sequence	The signal line sequence inputted indicator

Note: 1. In this table, the “J” indicates any of the outlet “J1 ~ J13”

4.2 Place the ADSL Loop Extender

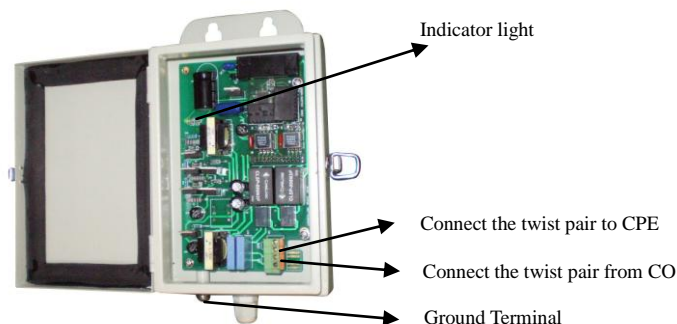


Figure5 Picture of AER800-1PL

- 1) Connecting the ground cable:

Copper-core wire with no less than 1.5mm^2 section area is required as ground wire. One end of the wire should connect to ADSL Loop Extender's ground terminal. The other end of the wire should connect to a good grounding point. (Suggestion: grounding resistance is less than 5Ω).

- 2) Connect the cable:

Connect the line from DSLAM and power supply to “CO” socket, connect the line linked to the modem to the “CPE” socket.

Attention: The Power Supply should NOT be turn on until the Extender installation is finished.

- 3) Observation the indicator light:

After cable connected well and power supply is on, press DC48 switch on to

check whether the indicator light is solid on always, always is normal.

- 4) Close the lid of ADSL Loop Extender and pinched it firmly.

4.3 Power up

After confirming that all the twist-pair cables are connected correctly and enclosure is securely installed, press DC48V power switch to power up the system. The ADSL Loop Extender will work in 20 seconds after power is supplied steadily.

5.Troubleshooting

If the ADSL Loop Extender can't work well, please compare to the Table5 and Table6 to find out the problems.

Table 4 AEC-B1PL Troubleshooting

Problem Description	Possible Reason	Suggested Resolution
Power LED is off	1) Power cord is not correctly connected. 2) Power switch is not open	1) Check power cord connection. 2) Press the power switch
The light of line sequence is on	The line sequence connected incorrectly	Exchange line sequence of inA and inB.
Output is OK but ADSL extender does not work.	Signal cable connection is error or short	Correct the Signal cable connection or check cable.

Table 4 ADSL Loop Extender Troubleshooting

Problem Description	Possible Reason	Suggested Resolution
Equipment does not work after power-up. Status LED is OFF.	cable is not connected properly.	Check signal cable.

No connection	Status LED is always on.	Cables at DSLAM side or Modem side are not connected properly , or the installation environments of AEC couldn't meet the condition of distance	Correct the cable connection , or choose another location which meet the condition of distance
	Status LED is off.	Cables linked ADSL Loop Extender not connected properly.	