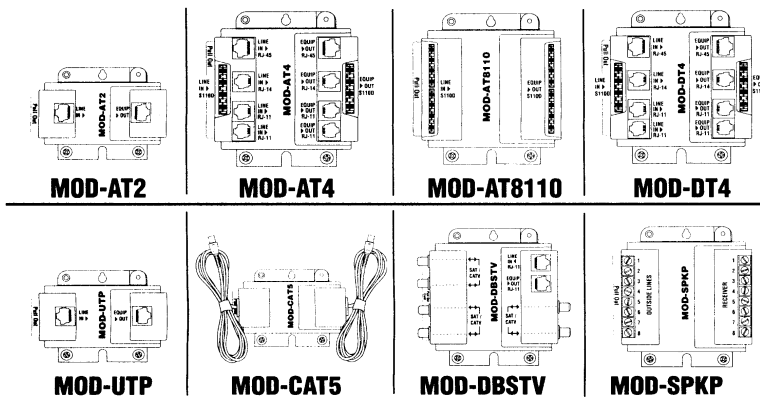


INSTRUCTIONS FOR PANAMAX SIGNAL LINE PROTECTION MODULES - PREMIUM SERIES



These modules are approved accessories for use with compatible Panamax AC base units. Compatible base units include the following:

CURRENT PRODUCTS				DISCONTINUED PRODUCTS		
AC Base Units				AC Base Units		
M8HT-PRO	PM8-EX	M4-EX	M8C-EX	M4	M8	M8KSU
M8-HT	PM8T-EX	M4T-EX	M8DBS-EX	M4T	M8T	M8COM
PM8-HT	PM8C-EX	M8-EX	M8C-Pro	M4L	M8C	M8KSU
	PM8DBS-EX	M8C-EX	M8HC-Pro			

When properly installed, the base unit's **Connected Equipment Protection Policy** remains valid. All modules include a small rectangular bracket and mounting screws. This bracket replaces the small triangular wall-mount bracket that comes with the models listed in the **CURRENT PRODUCTS** above.

Installation Instructions

1. Mount the rectangular bracket to the back of the AC base unit with the #8-32 x 5/16" machine screws.

Note: The brass ground connector must be used with the bracket in order to bond the module ground to the base unit's ground.

2. Mount the signal line module to the bracket (screws provided with the module).

3. Optional – The assembled base unit and module(s) may be wall mounted if desired.

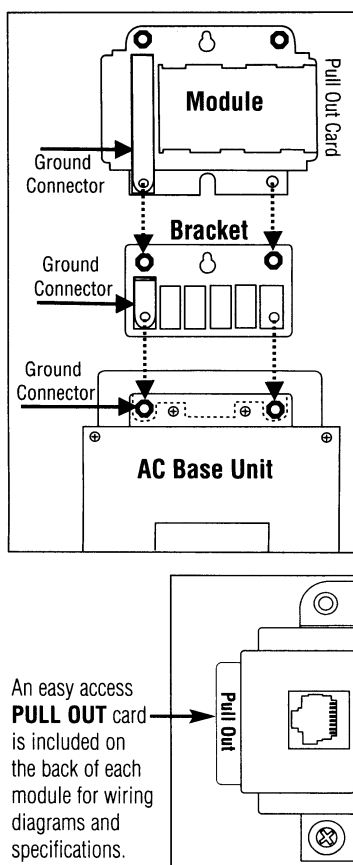
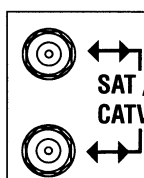
4. Connect the wiring to the signal line module as shown in the appropriate following section.

All telephone input/output connections will be labeled with **LINE** and **EQUIP**.



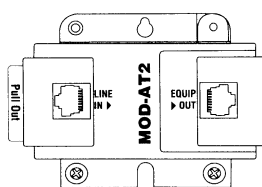
It is very important to connect telephone signal lines properly.

There are no designated input/output connections on coaxial protection modules. These are **bi-directional** modules in both transmission frequency and voltage.



An easy access **PULL OUT** card is included on the back of each module for wiring diagrams and specifications.

Model: MOD-AT2 (Secondary Protector)



WIRING DIAGRAM AND SPECIFICATIONS

MOD-AT2

For Analog Telephone Lines

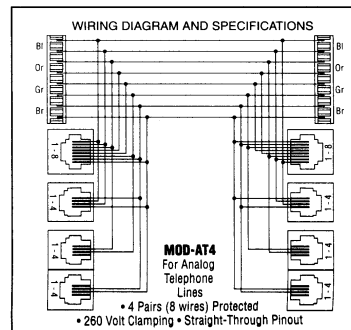
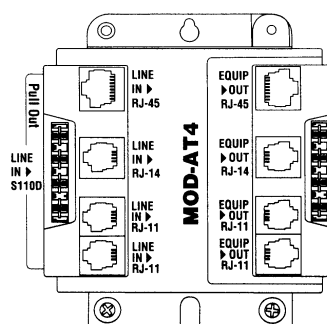
- 4 Wires (1 RJ-14) Protected
- 260 Volt Clamping
- Auto-resetting PTC's

The **MOD-AT2** module is designed to protect standard phone lines connected to computer modems, telephones, pay-per-view ports, etc. It will also protect DSL lines (ADSL, G.Lite) going into the DSL modem. The MOD-AT2 module will protect a single phone line using an RJ-11 (2 wire) cord or a dual phone line using an RJ-14 (4 wire) cord.

1. Connect the telephone line to the **LINE** jack on the module.

2. Use a modular cord to connect the **EQUIP** modular jack to the equipment to be protected.

Model: MOD-AT4 (Secondary Protector)



The **MOD-AT4** module is designed to protect standard phone lines and DSL (ADSL, G.Lite) lines. Multiple input & output jacks provide complete installation flexibility. The following diagram shows how the jacks/wires are interconnected. Different cables/connections can be split or combined to accommodate a variety of installations. For example:

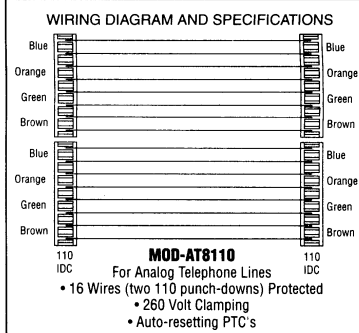
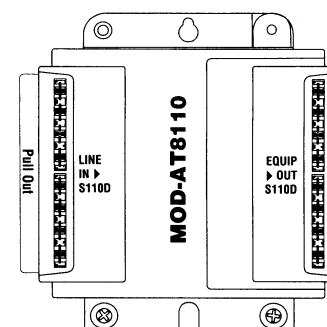
- Incoming lines can be punched-down on the 110 jack on the **LINE** side and four RJ11 (single-line) cords will connect from the **EQUIP** side to the equipment.

• Two RJ14 (dual-line) cords connected to the **LINE** side (upper 2 jacks) can be split to four RJ11 (single-line) cords on the **EQUIP** side.

• Four RJ11 (single-line) cords connected to the **LINE** side can be combined into a single RJ45 (8 wire) cord (upper jack) on the **EQUIP** side.

Caution: Never install telephones during a lightning storm.

Model: MOD-AT8110 (Secondary Protector)



The **MOD-AT8110** module is designed to protect up to 8 standard phone lines using 110 punchdown connectors on both the input **LINE** and output **EQUIP**.

cable to the **LINE IN** punchdown block on the module.

2. Punch down another cable to the **EQUIP OUT** punchdown block on the module and connect to the phone equipment.

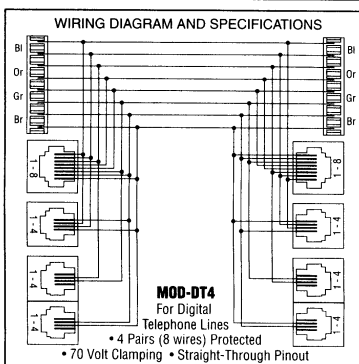
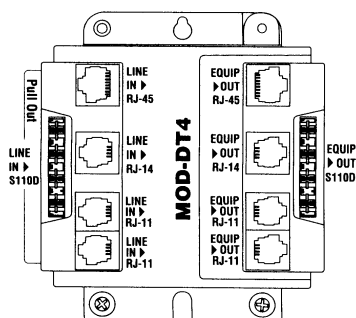
1. Cut the cable from the primary protector to the correct length and punch down the

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INSTRUCTIONS FOR PANAMAX SIGNAL LINE PROTECTION MODULES - PREMIUM SERIES

Model: MOD-DT4 (Secondary Protector)



The **MOD-DT4** module is designed to protect Digital Station (DS) Set phone lines. Station Set lines that leave the building are a pathway for surges (backdoor) to enter the phone system. This is why the lines **FROM** the Station Sets are connected to the **LINE** side of the module and the **EQUIP** side of the module is connected to the phone system. Multiple input & output jacks provide complete installation flexibility. The following diagram shows how the jacks/wires are interconnected. Different cables/connections can be split or combined to accommodate a variety of installations.

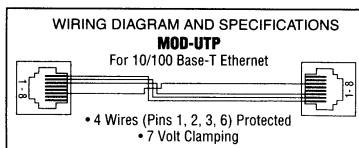
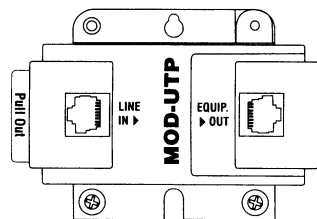
For example:

- Station Set lines from the phone system can be punched-down on the 110 jack on the **EQUIP** side and four RJ11 (2 wire) cords will connect from the **LINE** side to the Station Sets.

- Station Set lines from the phone system can be punched-down on the 110 jack on the **EQUIP** side and two RJ14 (4 wire) cords will connect from the **LINE** side (upper 2 jacks) to the Station Sets.

Caution: Never install telephones during a lightning storm.

Model: MOD-UTP (Isolated Loop Circuit Protector)



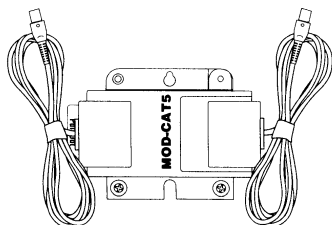
The **MOD-UTP** module is designed to protect networked computer equipment. It will protect one Ethernet 10/100 Base-T, Token Ring, Arcnet, or AppleTalk network line.

1. Connect the network line from wall/floor jack to the **LINE** jack on the module.

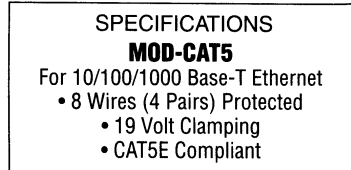
2. Use a modular cord to connect the **EQUIP** modular jack to the equipment to be protected.

Please note: The protection circuitry will not work if the signal lines are reversed.

Model: MOD-CAT5 (Isolated Loop Circuit Protector)

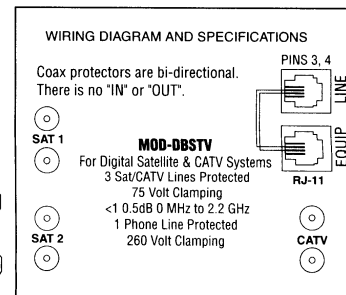
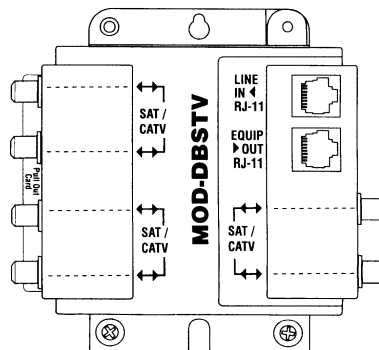


The **MOD-CAT5** module is designed for high-speed data applications-networks including CAT 5, fast Ethernet, ATM, and other high-speed active transport devices.



1. Connect the CAT 5 cable connected on either side on the module to the wall/floor jack and then to the equipment to be protected. There is no "IN" or "OUT". MOD-CAT5 is bi-directional.

Model: MOD-DBSTV (Secondary Protector)



The **MOD-DBSTV** module provides protection for 3 SAT / CABLE / ANT and 1 telephone line.

1. Connect the Satellite LNB or Cable TV coax cable from the wall/floor jack to one of the "F" connectors labeled SAT/CATV on the module

2. Use a coax patch cord to connect the other **SAT/CATV** labeled modular "F" connector to the equipment to be protected.

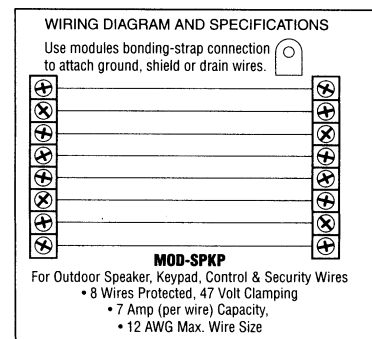
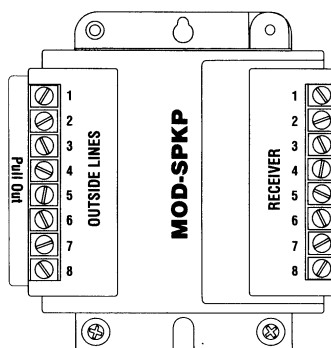
3. Repeat steps 1 and 2 for up to 2 additional satellite or cable TV lines.

4. Connect the telephone line to the **LINE** jack on the module.

5. Use a modular cord to connect the **EQUIP** modular jack to the equipment to be protected.

Note: This reminder is provided to call the CATV installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of entry as possible.

Model: MOD-SPKP (Isolated Loop Circuit Protector)



The **MOD-SPKP** module is designed to protect outdoor speaker, keypad, control and security wires (8 wires or 4 pairs). Equipment lines that lead outside the building are pathways for surges (sometimes called backdoor surges) to enter the equipment. This is why the lines **FROM** the outdoor equipment is connected to the **LINE** side of the module and the **EQUIP** side of the module is connected to the equipment.

1. Strip the ends of the individual wires about 1/4 inch. The screw clamp terminals will work with a range of wire sizes (up to 12AWG). Spade lugs are not required, but may be used.

2. Connect the wires from the outdoor equipment to terminals on the **LINE** side of the module.

3. Connect the wires from the **EQUIP** side of the module to the equipment.

4. If the cable has a shield or drain wire, connect it to the modules bonding-strap connection located on the upper right portion of the module. If more than one module is connected to the AC base unit, placing this module at the top may allow for easier connection of shield or drain wires.

This bracket is for use with the following products and allows the addition of towerMAX signal line protection modules (sold separately).

■PM8-EX ■PM8T-EX
■PM8C-EX ■PM8DBS-EX

■M8-EX ■M8T-EX ■M8C-EX
■M8DBS-EX ■M4-EX ■M4T-EX

■M8C-Pro ■M8HC-Pro

Note: This bracket replaces the small triangular wall-mount bracket that comes with the models listed above. The ground connector strip bonds the grounding capability between the AC Base Unit and the Module.

Installation instructions:

1. Remove the triangular bracket from the AC base unit.
2. Mount the rectangular bracket to the back of the AC base unit with the #8-32 x 5/16" machine screws.
3. Mount the signal line module to the bracket (screws provided with the module).
4. Connect the wiring to the signal line module as shown in the module instructions.

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