

QUICK START GUIDE – TR-6000

Administrative Settings

Image File Name	Enter the location of the Bios update file then press ‘Upgrade Software’
Factory Defaults Restore	Returns all settings to factory defaults.
Device Name	The network name of the device.
User Name	The access user name.
Password/Confirm Password	Enter the password for accessing the device
Ext. Info Enabled	Enable extended information.

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WDS

Tranzeo Tr-AP-5a Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address http://192.168.2.45/frameset.html Go Links

TRANZEO
802.11b/2.4Ghz
Tr6-AP 2b

AP Setup Menu
[Wireless Settings](#)
[Administrative Settings](#)
[WDS](#)
AP Security
[Basic](#)
[Advanced](#)
[Access Control](#)
AP Status
[Stations List](#)
Network
[Configuration](#)
Log Off

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WDS

Enabled ☐

AP MAC Address 1

AP MAC Address 2

AP MAC Address 3

AP MAC Address 4

AP MAC Address 5

AP MAC Address 6

http://192.168.2.45/ap/Tr_WDS.html Internet

Enabled	Select this box to enable WDS
AP MAC Address 1-6	Enter the MAC addresses of the other APs

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Security Basic

The screenshot shows a web browser window titled "Tranzeo Tr-AP-5a Configuration - Microsoft Internet Explorer". The address bar shows "http://192.168.2.45/frameset.html". The page content is divided into a left sidebar and a main content area. The sidebar contains the Tranzeo logo, device information (802.11b/2.4Ghz, Tr6-AP 2b), and a menu with links: AP Setup Menu, Wireless Settings, Administrative Settings, WDS, AP Security (Basic, Advanced, Access Control), AP Status, Stations List, Network Configuration, and Log Off. The main content area is titled "Basic Security Settings" and features a "WEP" section. It includes an "Enabled" checkbox, an "Authentication" dropdown set to "Open", a "Key Length" dropdown set to "64 bit", and a "Default Key" dropdown set to "WEP Key 1". Below these are four input fields for "Activate Keys", each containing the hexadecimal value "1234567890". At the bottom of the WEP section are "Apply" and "Back to Information Page" buttons. The browser's status bar at the bottom shows "Done" and "Internet".

Enabled	Turn On WEP
Authentication	Turn on Shared Key Authentication
Key Length	Level of Encryption. NOTE: 64 bit is called 40 bit on some systems
Default Key	Choose the default WEP key
Activate Keys	Enter your WEP keys. NOTE: Keys must be entered in HEX only.

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Security Advanced

The screenshot shows a web browser window titled "Tranzeo Tr-AP-5a Configuration - Microsoft Internet Explorer". The address bar shows "http://192.168.2.45/frameset.html". The page has a blue header with the title "Advanced Security Settings". On the left is a sidebar menu with the Tranzeo logo, "802.11b/2.4Ghz Tr6-AP 2b", and links for "AP Setup Menu", "Wireless Settings", "Administrative Settings", "WDS", "AP Security" (with sub-links for Basic, Advanced, and Access Control), "AP Status", "Stations List", "Network Configuration", and "Log Off". The main content area is titled "WPA" and contains the following settings:

- WPA Section:**
 - Enabled: ☐
 - Cipher Type: AES (dropdown)
 - PSK: password88 (text box)
 - Update Interval (s): 3600 (text box)
- Authentication Section:**
 - Enabled: ☐
 - MAC Address: ☒
 - RADIUS Server IP Address: 0.0.0.0 (text box)
 - RADIUS Server Shared Secret: radius_shared (text box)
 - Timeout (min): 60 (text box)
 - Server Port: 1812 (text box)

At the bottom of the main content area are two buttons: "Apply" and "Back to Information Page". The status bar at the bottom of the browser window shows "Done" and "Internet".

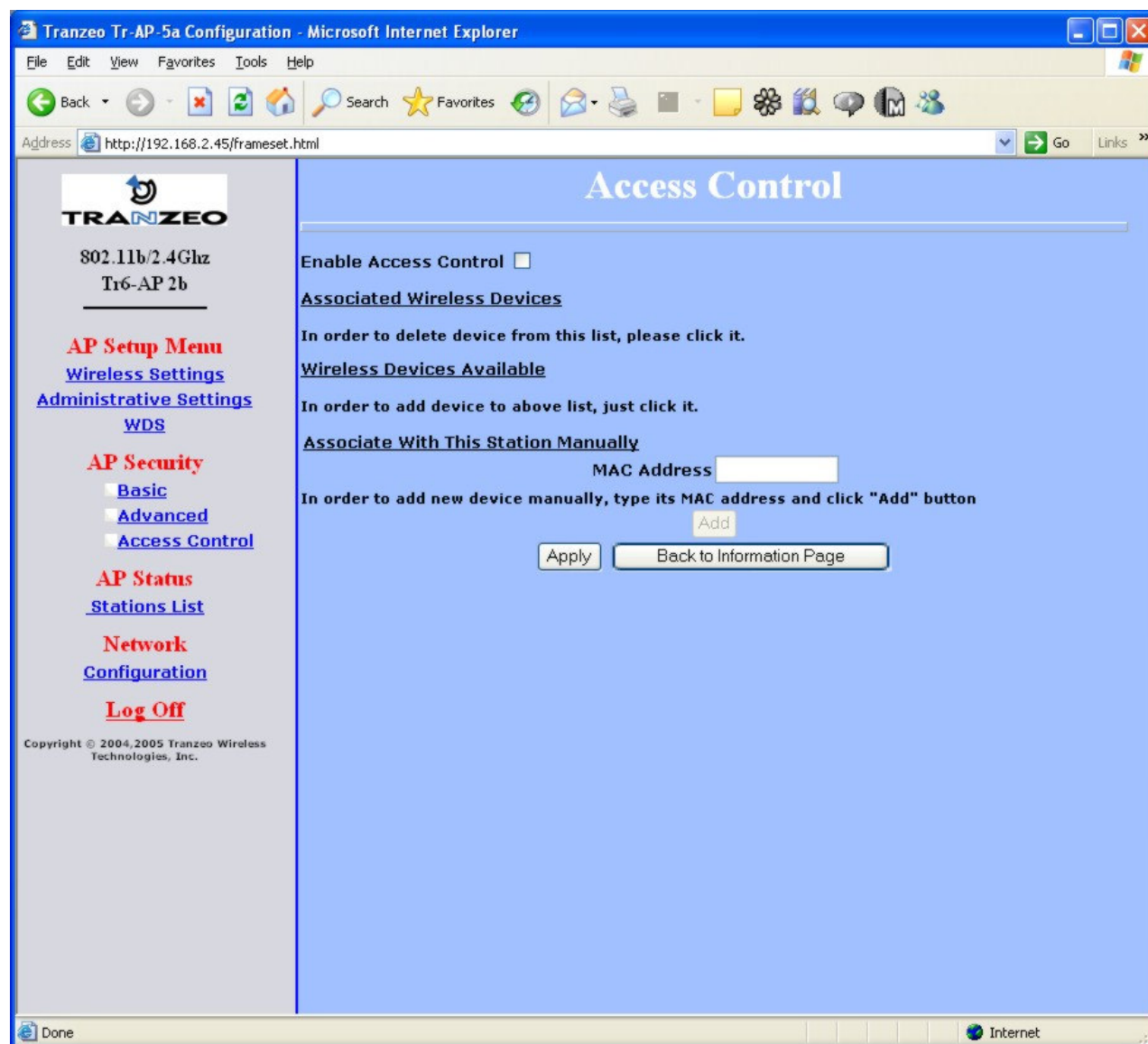
Enabled	Turn On WPA
Cipher Type	Level of Encryption. TKIP or AES
PSK	Enter your password
Update Interval	Enter the update interval
Enabled	Turn on 802.1x RADIUS Server Authentication
RADIUS Server IP Address	Enter the server IP
Timeout (min)	Enter the timeout period

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RADIUS Server Shared Secret	Enter the name of the server
Server Port	Enter the port of the server

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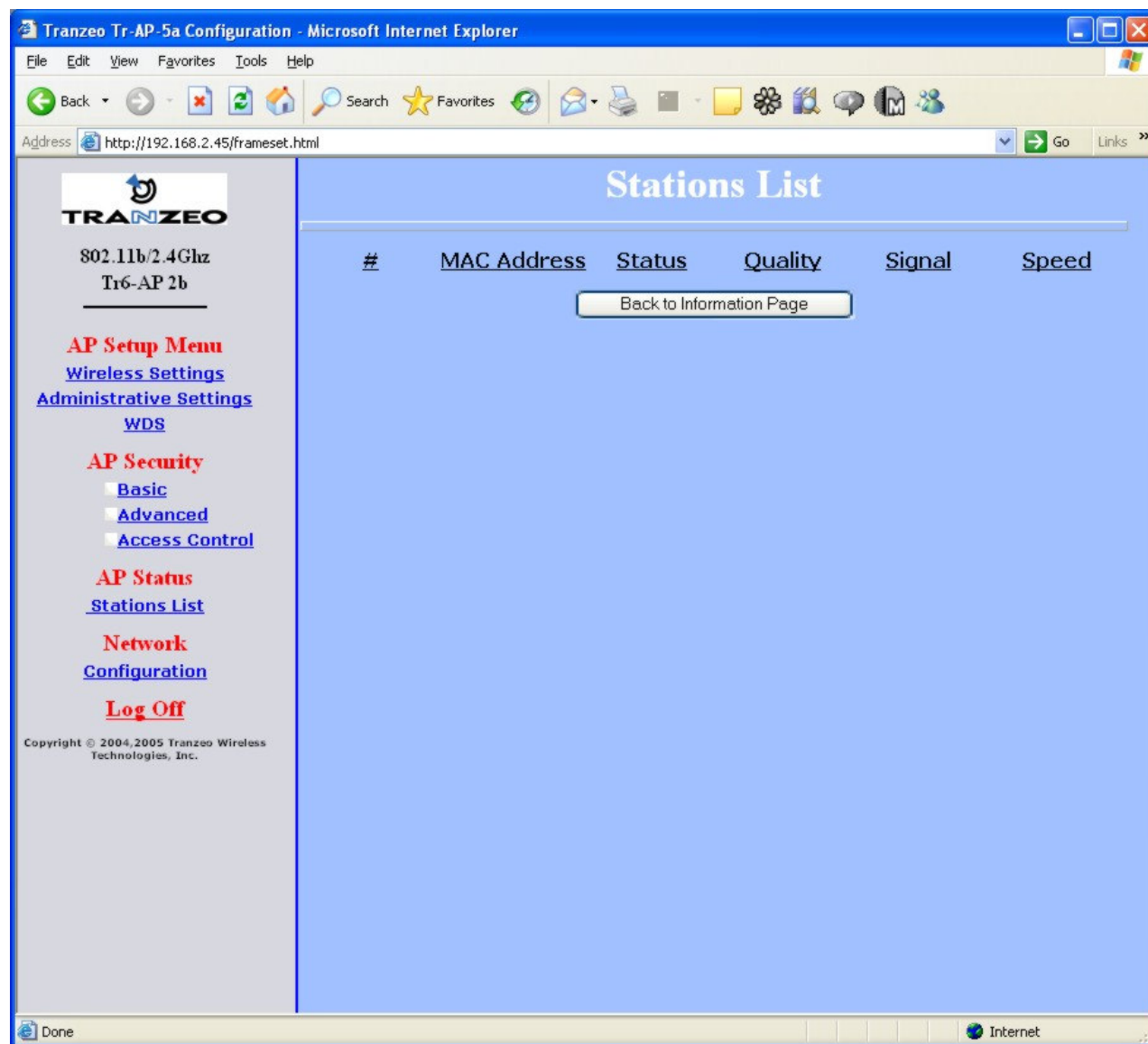
Access Control



Enable Access Control	Select this box to enable access control.
Associated Wireless Devices	Click any devices to disassociate them
Wireless Devices Available	Click any wireless device that should be associated with the AP
Associate With This Station Manually	Enter the MAC address of a client and then click “add” to associate with it.

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Stations List



This page displays a list of the stations associated with the AP and their connection statistics.

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Network Configuration

This page allows you to control the network configuration of the device. Enable the Router option to change the IP configuration for the LAN. You can also choose Static or DHCP IP configuration for both the device and any associated IP clients.

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APPENDIX A: LIGHTING INFORMATION

What is a proper Ground?

This antenna must be grounded to a proper Earth Ground.

According to the The National Electrical Code Sections 810-15s and 810-21, the grounding conductor shall be connected to the NEAREST accessible locations of the following:

- a) The building / structure grounding electrode
- b) The grounded interior metal water piping system
- c) the power service accessible means external to enclosure
- d) the metallic power service raceway
- e) the service equipment enclosure
- f) The grounding electrode conductor

The important thing is to connect to ground at the nearest point.

Why is coiling the LMR or CAT5 bad?

The myth is that lightning follows the path of least resistance. It actually follows the path of least impedance. Coiling cables creates an air-wound transformer, which lowers the impedance. This means you are in fact making your radios a more appealing target for surges.

What standard does Tranzeo Wireless equipment meet?

This radio exceeds International Standard IEC 61000-4-5 when properly grounded. For a copy of the full testing report, see *Report Number TRL090904 - Tranzeo Surge Protection board* located on the Tranzeo website.

Is lightning damaged covered by the Warranty?

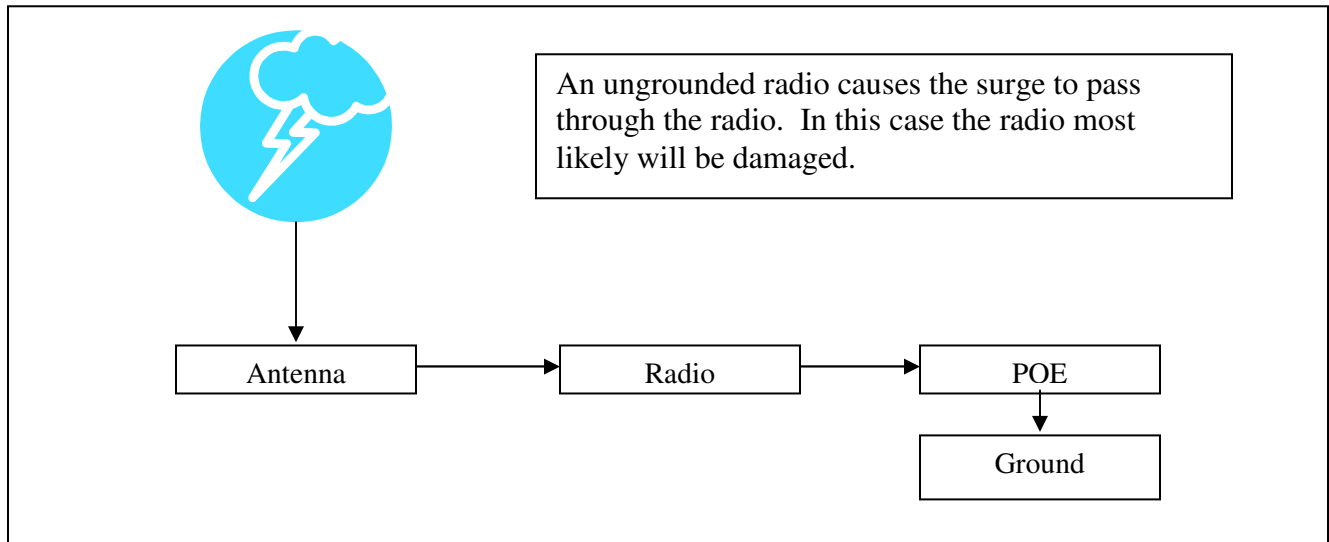
No. Lightning is not covered by the warranty. If you follow the instructions, your chances of lightning damage are greatly reduced, but nothing can protect a radio from a direct lightning strike.

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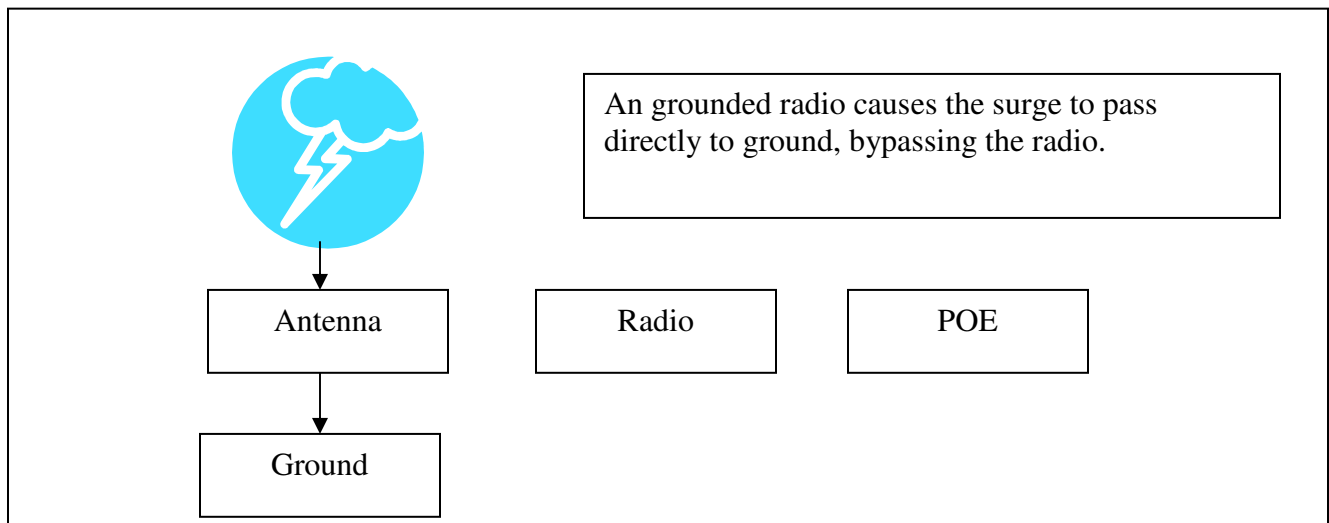
Where to Ground the device

This radio must be grounded at the Pole **AND** at the POE. This is because the radio is between the Exterior Antenna and the POE ground. See the examples below

Ungrounded Radio

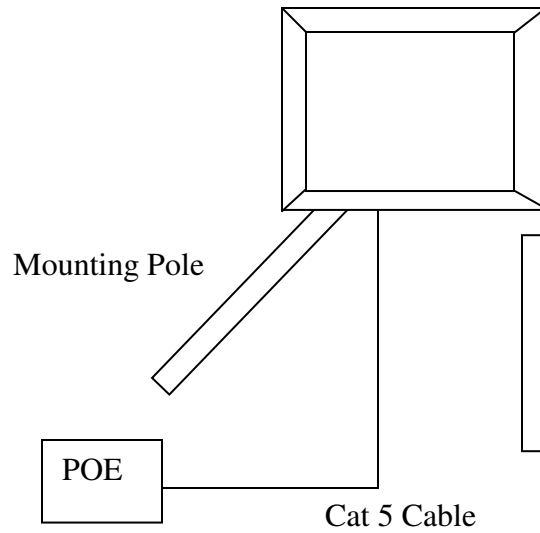


Grounded Radio



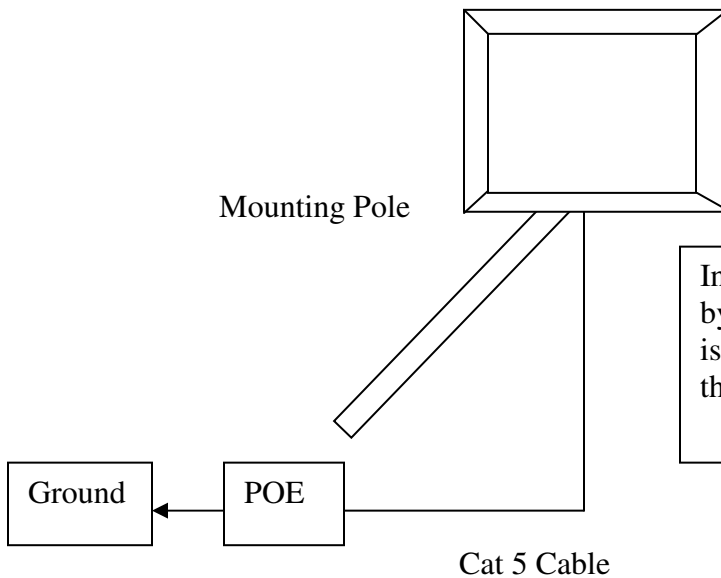
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Ungrounded POE



In this case, the surge will be picked up by the Cat 5 cable, and since the POE is not grounded, the route for the surge is through the radio to the antenna, and out through the building.

Grounded POE

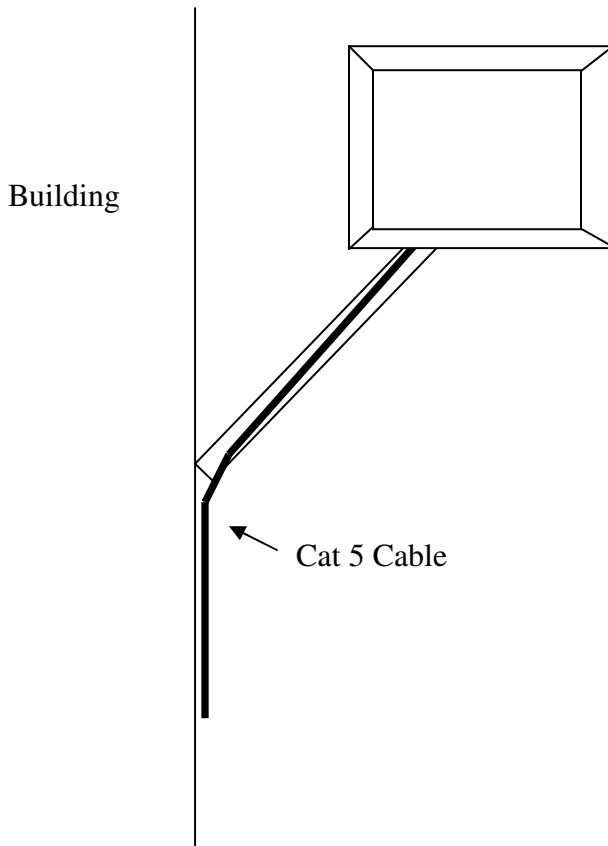


In this case, the surge will be picked up by the Cat 5 cable, and since the POE is grounded, the route for the surge is through the POE to ground.

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Best Practices

- 1) Always try to run the Cat5 and LMR inside of the mounting pole wherever possible. This helps to insulate the cable from any air surges.



- 2) Keep all runs as straight as possible. Never put a loop into the cables.
- 3) Test all grounds to ensure that you are using a proper Ground. If using a electrical socket for Ground, use a socket tester, such as Radio Shack 22-141
- 4) Buy a copy of the National Electrical Code Guide and follow it.
- 5) If you are in doubt about the grounding at the location, drive your own rod and bond it to the house ground. At least you will know that one Rod is correct in the system.