



QUICK START GUIDE FOR THE TRANZEO WIRELESS TR-6000

REVISION 1.0
FIRMWARE BUILD 22
MARCH 10, 2005

QUICK START GUIDE – TR-6000

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a Residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.

Operation of this equipment in residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

The user should not modify or change this equipment without written approval from Tranzeo Wireless. Modification could void authority to use this equipment.

For the safety reasons, people should not work in a situation which RF Exposure limits be exceeded. To prevent the situation happening, people who work with the antenna should be aware of the following rules

1. Install the antenna in a location where a distance of **59 cm** from the antenna may be maintained.
2. While installing the antenna, do not turn on power to the unit.
3. Do not connect the antenna while the device is in operation.
4. The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety Notices

Safety Precautions:

YOU MUST READ AND UNDERSTAND THE FOLLOWING SAFETY INSTRUCTIONS BEFORE INSTALLING THE DEVICE:

- This antenna's grounding system must be installed according to Article 810-15, 810-20, 810-21 of the National Electric Code, ANSI/NFPA No. 70-1993. If you have any questions or doubts about your antenna grounding system, contact a local licensed electrician.
- Never attach the Grounding Wire while the device is powered.
- If the ground is to be attached to an existing electrical circuit, turn off the circuit before attaching the wire.
- Use the Tranzeo POE only with approved Tranzeo models.
- Never install Radio Equipment, surge suppressors, or lightning protection during a storm.

A BRIEF WORD ON LIGHTNING PROTECTION

The key to a Lightning Protection is providing a harmless route for lightning to reach ground. The system should not be designed to attract lightning, nor can it repel lightning. National, State and local codes are designed to protect life, limb and property, and must always be obeyed.

When in doubt, consult local and national electrical codes or contact an electrician or professional trained in the design of grounding systems.

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Introduction

This next-generation wireless LAN device – the TRANZEO TR-6000, brings Ethernet-like performance to the wireless realm. Fully compliant with the IEEE802.11b standard, the TRANZEO TR-6000 also provides powerful features such as the Internet-based configuration utility as well as WEP and WPA security. Maximize network efficiency while minimizing your network investment and maintenance costs.

Hardware Installation

Product Kit

Before installation, make sure that you have the following items:

- The TR-6000 x 1
- DC Power Adapter x 1
- Power over Ethernet Adapter x 1
- Ethernet Boot x 1
- Mounting Bracket x 1
- Ket Nuts (With Washer Attached) x 8
- U-Bolt w/ 2 Nuts x 1
- RJ-45 Patch Cable x 1
- Ethernet Boot Gasket x 1
- Ethernet Cable Lock x 2

- Optional: Ethernet Boot Tightening Bracket x 1

If any of the above items is not included or damaged, please contact your local dealer for support.

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Mechanical Description

LED panel of the Wireless LAN Smart Access Point:

The following table provides an overview of each LED activity:

Label	Color	Indicators
POWER	Red	On: Powered On Off: No Power
LAN	Green*	On: Ethernet Link Flashing : Ethernet Traffic Off: No Ethernet Link
Radio	Amber	On: Radio Link Flashing Radio Activity Off: No Radio Link
Signal	Red/Amber/Green	In CPE mode, light up in sequence to indicate signal strength

In AP mode the signal lights indicate the following:

Color	Indicators
Red	On: WEP/128 Enabled Flashing: WEP/64 Enabled Off: WEP Off
Amber*	On: WPA/AES Enabled Flashing : WPA/TKIP Enabled Off: WPA Off
Amber	Flashing: 2.4 GHz operation
Green	On: ACL Enabled Off: ACL Off
Green	On: WDS Enabled Off: WDS Off

Power Supply

ONLY use the power adapter supplied with the TR-6000. Otherwise, the product may be damaged.

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Hardware Installation

Take the following steps to set up your TR-6000.

Site Selection: Before installation, determine the TR-6000 unit's location. Proper placement of the unit is critical to ensure optimum radio range and performance. You should perform a Site Survey to determine the optimal location. Ensure the CPE is within line-of-sight of the Access Point. Obstructions may impede performance of the unit.

Tools Required to Install

- One 3/8 wrench
- One 3/4 wrench
- One RJ-45 Crimper
- A suitable length of Cat 5 Cable to bring the signal from the unit to the Power over Ethernet Adaptor
- 2 RJ-45 Jacks

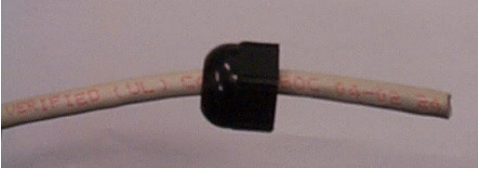
Before installing, you must determine if the unit will be in the horizontal or vertical orientation. The TR-6000 model can be mounted in either orientation. The Ethernet boot should always be placed so that the cable runs toward the ground for maximum environmental protection.



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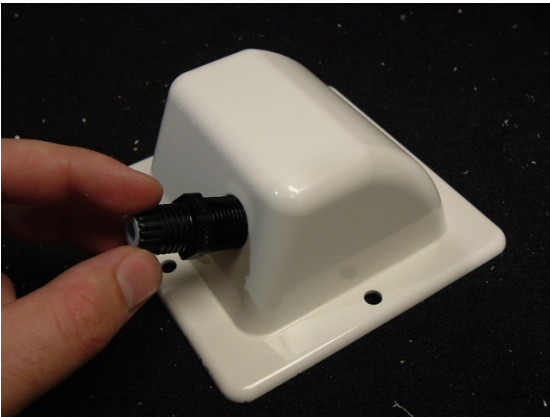
Connecting the Ethernet Cable

Step 1



Place the Ethernet Boot Cover over the end of your Cat 5 Cable. Attach the sticky side of the gasket to the underside of the Ethernet Boot.

Step 2



Attach Ethernet Cable Lock on side of the Ethernet Boot. This is easiest to do before you attach the RJ-45 Jack.

Step 3



Tighten using a 3/4" wrench or socket. Tighten until the Cable Lock touches the Boot as shown in Step 3.

USE HAND TOOLS ONLY. DO NOT OVERTIGHTEN
as you may damage the environment seal.

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Step 4



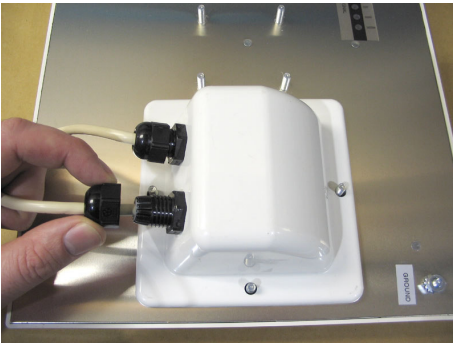
Repeat steps 2 & 3 to attach the second Ethernet Cable lock.

Step 5



Attach the Gasket to the Boot so that it sits between the radio and the boot.

Step 6



Insert the Cat 5 Cable and tighten the Boot Cover. Be sure to pull enough cable through to reach the RJ-45 connector with an RJ-45 jack attached. The Gasket must be attached to the Boot so that it sits between the radio and the boot.

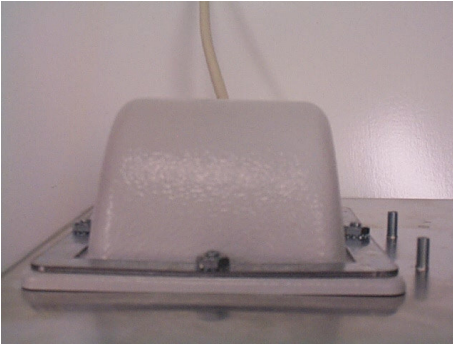
Hand tighten only. **DO NOT OVERTIGHTEN** as you may damage the environment seal.



If you are not going to be using the second port make sure that it is tightened down to ensure a weather-tight seal.

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Step 7

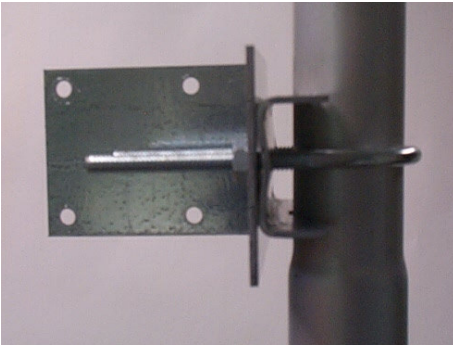


Place the Ethernet boot over the 4 Screw Posts. The screws should just barely clear the tightening bracket. Apply 4 Keep nuts to the screw posts and tighten until the gasket makes full contact with the Ethernet boot. Do not over tighten.



This is an example of over tightening. Over tightening connections like this may crack the boot and will compromise the gasket seal. Over tightening is not covered by warranty.

Attaching the Mounting Bracket



As shown below, the U-Bolt is designed to mount around a pole. Tighten bolts sufficiently to prevent any movement.



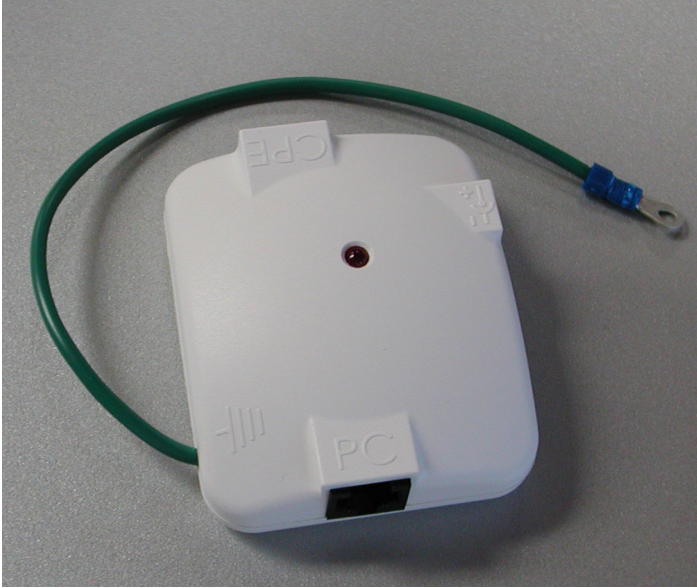
Down or up tilt can be adjusted by swinging the unit before tightening the U-Bolt.

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Grounding the Antenna

Using a #6 Green grounding wire, connect the Grounding Lug on the radio to a proper ground. See APPENDIX A Lighting Information for more information.

Connect the Power Cable



Connect the power adapter to the power socket on the Power over Ethernet Adaptor, and plug the other end of the power into an electrical outlet. Plug the RJ-45 Cable from the unit into the POE. The Station Adaptor will be powered on and the power indicator on the top panel will turn on.

NOTE: ONLY use the power adapter supplied with the Access Point. Otherwise, the product may be damaged.

This unit must be grounded. Connect the green Grounding cable to a known good earth ground, as outlined in the National Electrical Code.

Dual Ethernet Ports

The TR-6000 has two Ethernet port available. **Port A** is used to connect to the radio in the radio in the case. **Port B** is used to power and provide Ethernet connectivity to additional devices. This allows for the chaining of multiple devices together.



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HTML Interface – Information Page

NOTE: The default IP address is **192.168.1.100**

The default User Name is **admin**

The default Password is **default**

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

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail News RSS Feeds

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

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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Information Page

Wireless Settings	
Link Status	No Link
SSID	R&DTestAP
Device Name	TR6-CPE-2b
Ethernet Settings	
IP Address	192.168.2.45
Subnet Mask	255.255.255.0
Gateway	192.168.2.2
Security	
Encryption	Off
Authentication	None
Radio	
MAC Address	0060B32379B4
Channel	1
Board	
OS	6.3.24A (0410)
Software	1.10 (Build 21R)
Event Log	
Hardware Events	(none)

Internet

In the frame on the left, select the option you wish to configure.

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Wireless Settings

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

File Edit View Favorites Tools Help

Address <http://192.168.2.45/frameset.html> Go Links »

TRANZEO
802.11b/2.4Ghz
Tr6-AP 2b

AP Setup Menu
[Wireless Settings](#)
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AP Status
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Network
[Configuration](#)

Log Off

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Wireless Settings

R&DTestAP

☒ Visible ☐ Invisible

CH 1 - 2.412GHz

Best (automatic)

3200

3200

100

1

0

☐ 802.11d Enabled

000000000000

☐ Force MAC Enabled

0 dB

SSID

Visibility Status

Channel

Tx Rate

RTS Threshold (0-3000)

Fragmentation Threshold (256-2346)

Beacon Interval (ms)

DTIM Interval

Burst Time

Force MAC

Power Backoff
The overall transmit power on all channels will be reduced by the number of dB entered here; this is applied after any other required power reductions.

Apply Back to Information Page

Done Internet

SSID	The SSID is a unique ID given to an Access Point. Wireless clients associating to the Access Point must have the same SSID. The SSID can have up to 32 characters.
Visibility Status	Makes the AP visible or invisible to clients.
Channel	Sets the channel that the AP and clients will use
TX Rate	The rate at which the radio will communicate with the clients. NOTE: Setting this rate below the maximum possible does not limit bandwidth, and often has a negative impact on the operation of your network.

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RTS Threshold (0-3000)	Select RTS that works best in your location. A general rule of thumb is the more clients you have, the lower the value should be set.
Fragmentation Threshold (256-2346)	Select Fragmentation that works best in your location. The lower the Fragmentation, the smaller the packets.
Beacon Interval	Sets the rate at which the AP will broadcast its location.
DTIM Interval	Sets the DTIM Interval.
Burst Time	Sets the Burst time
802.11d Enabled	Enable 802.11d.
Force MAC	
Force MAC Enabled	
Power Backoff	Power reduction in dB