INSTALLATION MANUAL

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Site Inspections

Before a customer can be installed, signal strength must be determined. If the customer's location is line of site to the repeater or within an 1/8th of a mile and vegetation is not too dense, the customer should be able to receive signal without the need for a test.

When a signal test is needed, do the following:

Using a test signal modem, point the device down toward the ground and activate. Slowly bring up the modem and point it toward the repeater and check strength against the PDA strength meter.

To test against a different repeater, deactivate the test modem and repeat the process.

Installation 101

An installation should be neat and done in a timely fashion. And should not take more than two hours. An installer should take the time to go over all the information that the customer needs to know to get online and how to check e-mail.

1. Take paper work into customer and find out where computer is located in house, go over with customer how installation is going to be done.
2. Establish the location of the repeater and mount the antenna on the roof, line of sight is preferred, but not needed to install. (if non line of sight, choose a higher power setting when programming the modem.)
3. Mount antenna-using application that best suits installation.
4. Wire run is the most important part of an installation. It should be neat and out of sight to the homeowner.
5. After wire is run, go inside and drill hole from the inside to the outside. Make sure that you don't drill through any utilities, (plumbing, electrical, etc.) first make hole by using screwdriver than drill hole.
6. Fish wire through hole from the outside into computer room. After drilling is done, seal hole with silicone.
7. When inside the house, put wall plate on and make crossover end. Plug the end from antenna into splitter and plug into Ethernet port in the computer.
8. Download software and finish installation. Configure e-mail, set MTU and go over how to use Digital path to the homeowner.

If setting up multiple computers, up to three simultaneous connections can be supported using a hub. More than three computers will require either the use of a router or the setting up of a PPTP connection. An established network can be plugged directly into a router. For PPTP, one computer in a network running windows 2000 or XP is set up to connect and share the connection. In all cases, computers connecting using digital path must have their MTU settings changed.

Installer Tool List

18-volt Dewalt drill
7/16 " nut driver
3/8 " nut driver

Wire cutters
Crimping tool – RJ45 crimper
Wire strippers
Powerfast cable tacker
Torpedo level
3/8" x 13" masonry bit
5/16" x 13" wood bit
Dewalt drill set
Dewalt screwdriver set for drill
Molly anchors with bit
Long flat head screwdriver
Phillips screwdriver
Flashlight
Hacksaw

Basic Mounts

1. Eve Mount
2. Roof Mount
3. Chimney Mount

An Eve installation consists of a 4 inch gutter mount, 2 1 ¾ inch square head screws, a 12 inch piece of electrical conduit. The wire run is determined by computer location relative to location of the roof top unit.

A Roof mount consists of 2 6inch L-brackets, 4 1 ½ to 2 ½ long screws the length of screw depends on roof), a piece of 8 inch aluminum angle with 2 ¼ inch holes on opposing ends, a piece of conduit length according to application, and 2 7/16 nuts and bolts to connect aluminum to the L-brackets.

A Chimney installation is mounted by using a single L-bracket attached with 2 molly anchors in stucco applications and with 2 1-½ screws on wood applications

Eve mount
    1. 4 inch wall mount
    2. 2 1-3/4 panhead screws
    3. One piece of conduit length according to install

If conduit length is over 3 feet bracing is needed.

Bracing
    1. Two pieces of angle bracing
    2. Two 7 inch u-bolts
    3. Two pieces of roof anchors
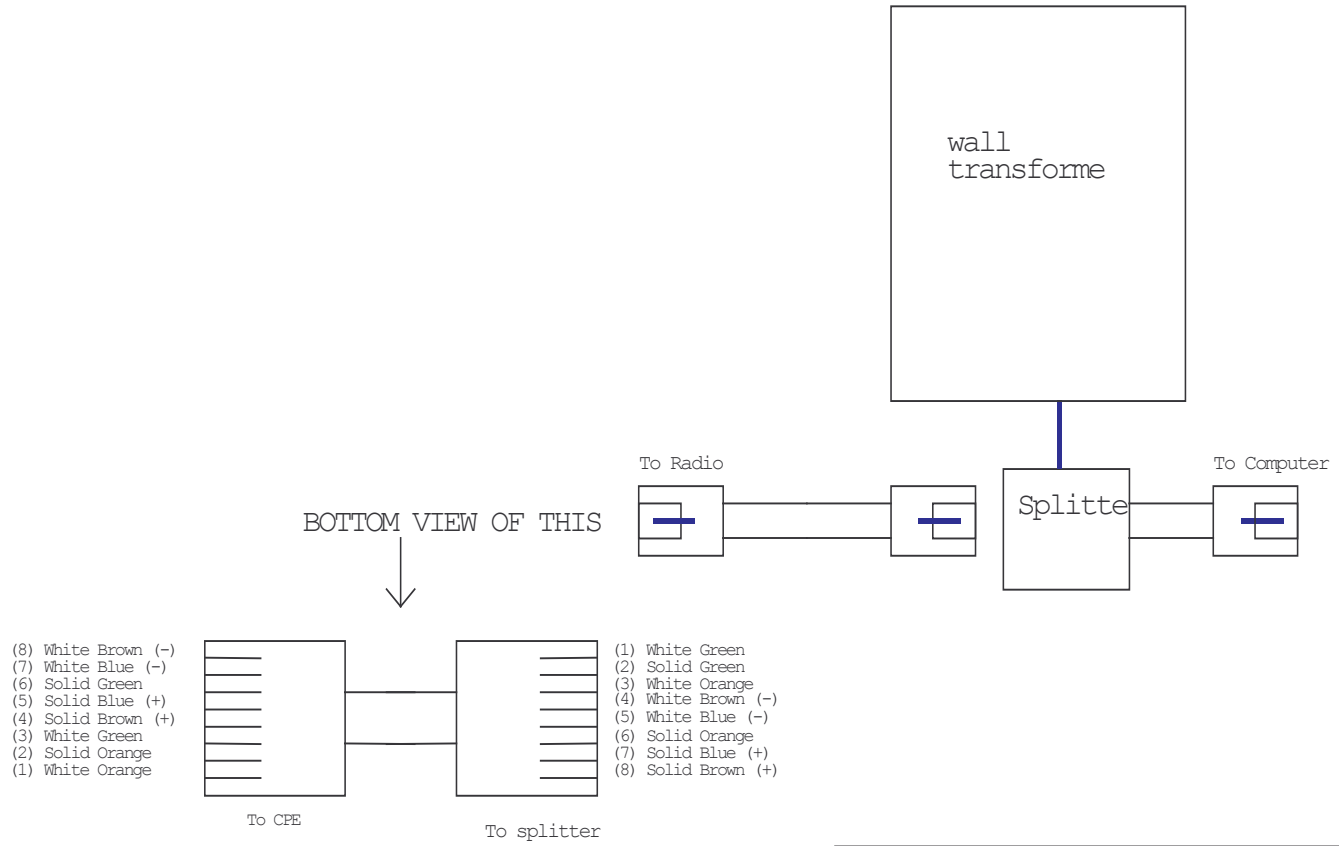   4. Two 1" by ¼ bolts

L-bracket
    1. 1 six inch l bracket
    2. 2 1-3/4 pan head screws

These mounts can be used any place on the house, on the eve or on the chimney on the side of the house. If a customer has preference to where CPE is mounted and the installer can do it in the two-hour period, follow the customer's request. If installer cannot install according to customer wishing, find best spot to customer satisfaction and time scheduled and install. If mount penetrates any parts of house that water could get in use silicone to prevent leaking. Installers should try to mount CPE as close to computer with the best line of sight shot to relay.

Wiring Guide for CPE

Using the combined
supply and splitter

wall
transforme

To Radio

BOTTOM VIEW OF THIS

Splitte

To Computer

(8) White Brown (-)
(7) White Blue (-)
(6) Solid Green
(5) Solid Blue (+)
(4) Solid Brown (+)
(3) White Green
(2) Solid Orange
(1) White Orange

(1) White Green
(2) Solid Green
(3) White Orange
(4) White Brown (-)
(5) White Blue (-)
(6) Solid Orange
(7) Solid Blue (+)
(8) Solid Brown (+)

To CPE

To splitter

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CPE Configuration

PDA User Guide

1. Begin by connecting the PDA to the CPE similar to the laptops.
2. From the Applications tab, tap on Terminal.
3. In the Terminal window, type 'cpe' and press return.
4. The PDA will now establish communications with the CPE. This can take up to 60 seconds, so be patient. During this time the following messages will be displayed:
   a. cpe ip address = …
   b. cpe mac address = …
   c. cpe version = …
   NOTE: The '…' above will be filled in with setup values.
5. Once communication is established, the PDA will present the following questions:
   a. "Do you want to restore the default configuration on the cpe? [n]"
   b. "Do you have a clear line-of-sight to the access point? [y]"
   c. "Please choose a remote access point to connect to:" and a display of the available access points will be displayed.
   d. "WARNING: Once you configure the cpe, it cannot be changed!!" "Do you want to configure the cpe with these settings? [y]"
   NOTE: Default answers are in brackets. To select the default, press return. To change the default, enter your selection and press return. To select a number, press the 'Fn' key once, then the number.
6. The CPE will now be configured and the PDA will get a dynamic ip address through DHCP.

Troubleshooting

1. "invalid sento: Network is unreachable"
   a. this error is normally received when the cat5 cabling has not been properly connected/terminated. Check the cabling.
2. "snmpget access point client mode error"
   a. this error is normally received when the communication channel between the PDA and the CPE has been lost. Press the 'Fn' key and the 'c' key at the same time. This will exit the 'cpe' program. Now, reenter 'cpe' and press return.
3. When the Terminal program won't open
   a. this error is intermittent. Reboot the PDA by pressing on the 'Q' in the bottom-left corner and selecting Settings → Shutdown. Press the reboot button and wait for the PDA to Restart.

Federal Communication Commission Interference Statement

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

-        Reorient or relocate the receiving antenna.
-        Increase the separation between the equipment and receiver.
-        Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-        Consult the manufacturer for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

•IMPORTANT NOTE:
•FCC Radiation Exposure Statement:
•This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
•This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
•
INFORMATION TO USER:
•The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.