

# Section 7A

# Users Manual



**MOTOROLA**

# Installing and using the Expedience Outdoor Subscriber Unit (OSU)

## **Broadband Wireless Access System**

**This document is intended for use by professional equipment installers. Subscribers of the high speed Internet service should not attempt to install the OSU.**

Part Number: 104-0083-0001



104-0083-0001

Expedience is a trademark of Motorola.

Other brand and product names may be registered trademarks or trademarks of their respective holders.

Part number: 104-0083-0001-d

©2007 Motorola. All rights reserved.

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS GUIDE ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS GUIDE ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCT.

FOR WARRANTY INFORMATION ON THE EXPEDIENCE OSU, CONTACT THE INTERNET SERVICE PROVIDER THAT SUPPLIED THE OSU.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE THAT ARE PROVIDED ON THE EXPEDIENCE BROADBAND WIRELESS ACCESS MODEM CD-ROM ARE PROVIDED "AS IS" WITH ALL FAULTS. MOTOROLA DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL MOTOROLA OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OF DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS GUIDE, EVEN IF NEXTNET WIRELESS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

# CONTENTS

- Welcome ..... 1**
- Before you begin ..... 1**
  - Additional material required for installation ..... 1
  - Pre-installation planning ..... 1
- Connecting the OSU to a computer ..... 4**
  - Installation overview ..... 4
  - Cabling overview ..... 5
- Installing the OSU ..... 6**
  - Selecting an installation location for the OSU ..... 6
  - Installation overview ..... 6
  - Completing the mounting bracket assembly ..... 7
  - Attach the OSU and mounting bracket assembly to the outside of  
the building ..... 8
  - Fastening the OSU and mounting bracket assembly to a pole ..... 8
- Connecting Ethernet / power cable to OSU ..... 9**
- Running cables through building's wall ..... 10**
- Connecting the ground wire ..... 10**
- Installing a data line protector ..... 11**
- Plugging in the power supply ..... 12**
- Setting up the computer to receive an IP address ..... 12**
- Configuring IP address assignment for routers ..... 14**
- Connecting to the Internet ..... 14**
- Refreshing the OSU's connection ..... 14**
  - Windows users: Refreshing the connection ..... 14
  - Non-Windows users: Refreshing the connection ..... 14
- Connecting the OSU to a network ..... 14**
- FCC information ..... 15**

# Welcome

---

This document describes how to install and use the Expedience outdoor subscriber unit (OSU) to obtain wireless high-speed Internet access. Subscribers can connect the OSU to a computer or to a small office/home office (SOHO) local area network (LAN) through a hub, switch, or router.

This document is intended for use by professional equipment installers. Subscribers of the high-speed Internet service should not attempt to install the OSU. For questions about OSU operation or installation, subscribers should contact the ISP that supplied the OSU device.

## Before you begin

---

This section describes items the installer or subscriber must purchase before the OSU is installed. This section also describes items you need to have available and things to consider before beginning the OSU installation.

### Additional material required for installation

- The subscriber's computer must be equipped with an Ethernet network interface card (NIC). The NIC is not provided with the OSU, but subscribers can purchase a NIC at most computer and electronics stores.
- An RJ-45 Ethernet cable to connect the OSU plug-in power supply with the user's computer.
- Ground wire of sufficient length to run between the OSU and the home ground point.
  - It is recommended that the ground wire be a 6AWG, solid copper wire.
  - It is recommended that if a ground rod is used it should be 8 feet (2.5 m) copper. Note that most buildings have an existing ground rod outside, at the main power connection site. If desired, you can install a rod into the ground outside the building after consulting local electrical codes.
- If you mount the OSU on a brick or masonry surface, lead screw anchors are required.
- Outdoor-rated category 5e Ethernet cable
- RJ-45 plug connectors and the necessary tools for field termination of the category 5e cable

### Pre-installation planning

- Find an appropriate location on the outside of the building to mount the OSU.
  - To provide Internet service, the OSU communicates with a base station on the service provider's communications tower. The service provider must provide you with information about the nearest communications tower. For example, if the tower nearest to the building is north of the building, you will likely install the OSU on the north side of the building.
  - Mount the OSU on a high location on the building, such as under the eaves.

- Locate the components shipped with the OSU device. Table1 lists these components.

**Table 1 Components of the OSU package**

<b>Component</b>	<b>Part number</b>	<b>Quantity</b>
OSU device (vertical)	123-0083-1001	1
Bracket arm	360-0055-0121	1
Pole/wall bracket	360-0055-0120	2
Pole clamp	360-0055-0122	1
Lag bolt, hex head, 1/4" x 2, SS	594-9917-1464	4
5/16 hex bolt x 3.00	594-9925-5696	2
5/16 split lock washer, large, SS	596-3003-5619	2
5/16 flat washer, large, SS	596-3004-5624	4
Ground lug	598-0002-0100	1
Hex bolt, small, for lug	594-9925-1424	1
1/4 split lock washer, medium, SS	596-3003-1416	5
1/4 flat washer, medium, SS	596-3004-1420	5
1/4-20 x 5/8" hex bolt	594-9925-1420	4
5/16 x 1 1/2 hex bolt, SS	594-9909-5648	2
5/16 hex nut, nyloc, medium, SS	595-3218-5616	2
External tooth lock washer, SS	596-3002-5619	3
Power supply	420-0050-9000	1
Power cord	597-5120-0107	1
Silicone grease packet	023-0001-0050	1
OSU installation guide	104-0083-0001	1

Figure 2 illustrates the OSU package contents. Components are not to scale.

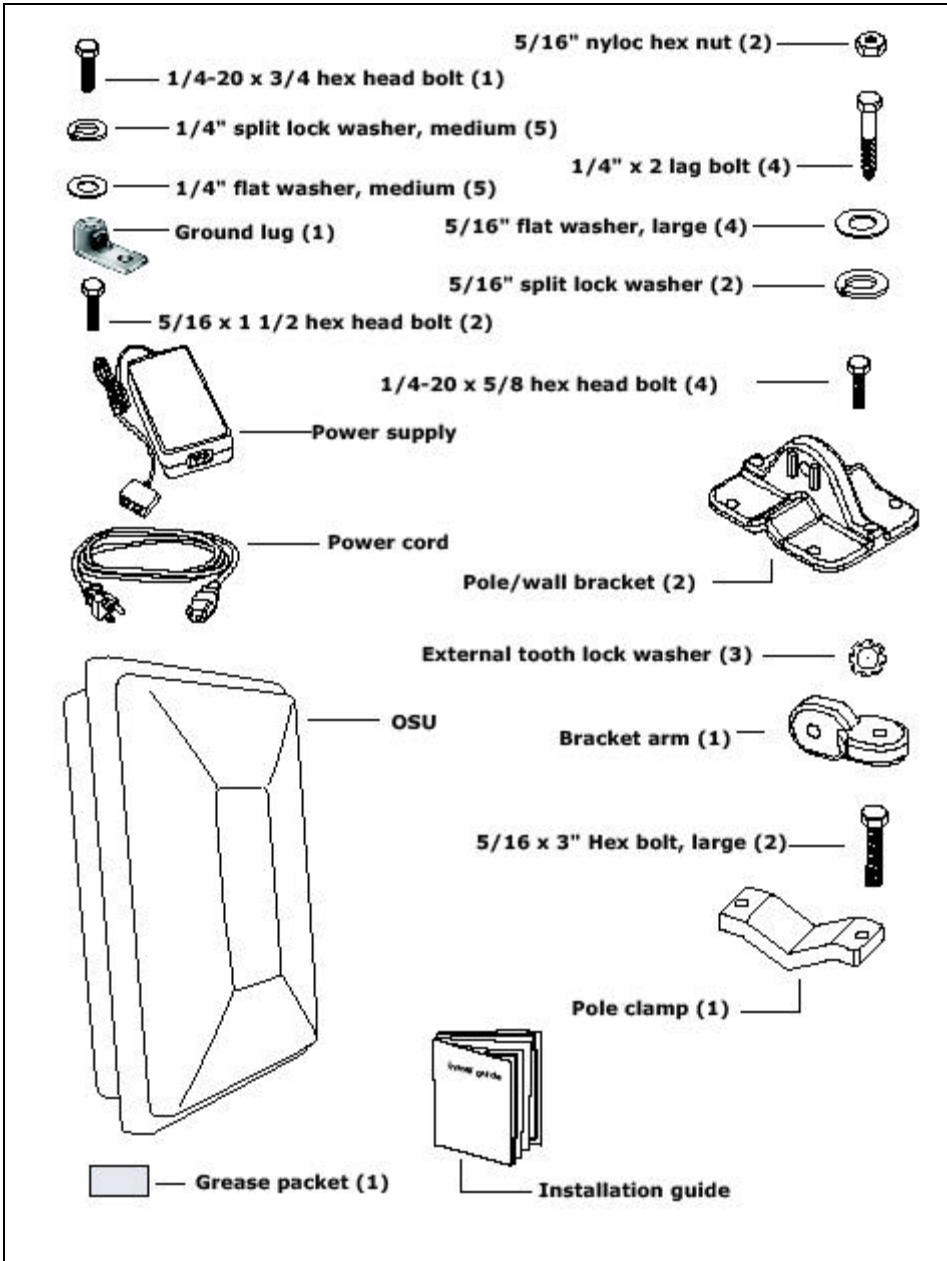


Figure 2 OSU package components, components not to scale

Figure 3 shows the package components, in an assembled unit.

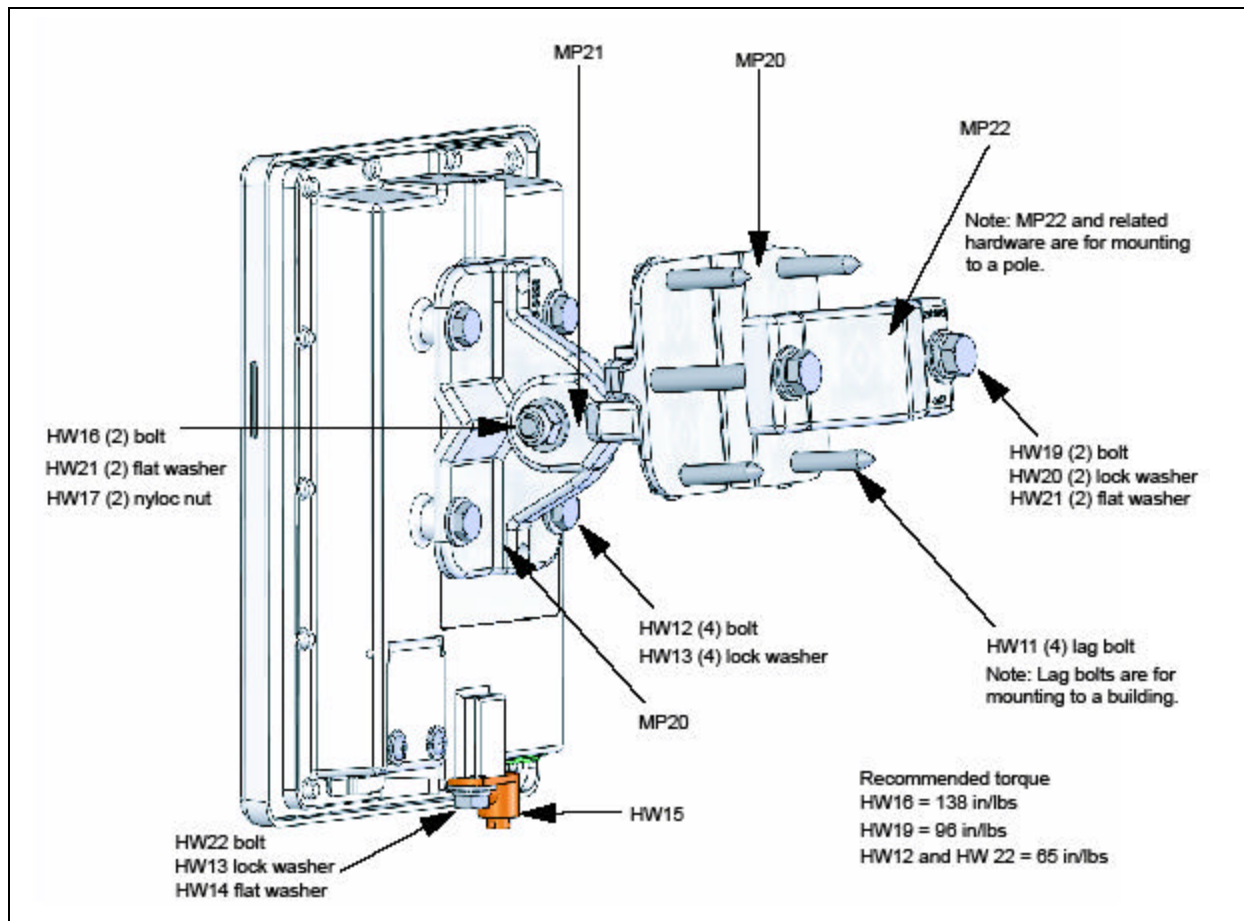


Figure 3 Package components on assembled OSU

## Connecting the OSU to a computer

This section describes how to connect the OSU to a computer.

If the OSU is to be connected to a network device (such as a router or switch), refer to the section "Connecting the OSU to a network" on page 14, in this guide.

### Installation overview

The installation consists of the following major tasks, each of which is explained in greater detail in the sections that follow:

- 1 Attach the OSU to the outside of the building.
- 2 Run the OSU power/Ethernet cable through a hole drilled through the building's wall.
- 3 Connect the OSU ground wire.
- 4 Connect the power cord to standard household power. Connect the OSU power/Ethernet cable and the computer's Ethernet cable to the appropriate jack opening in the dual RJ-45 power supply cord.
- 5 Adjust the OSU to obtain the strongest service provider signal.
- 6 Ensure that the computer is set up to automatically obtain an IP address.
- 7 Connect to the Internet.



## Cabling overview

Figure 4 illustrates the routing of the ground wire, the category 5e Ethernet cable, and the OSU power/Ethernet cable.

**Note:** The ground wire, grounding rod, outdoor power/Ethernet cable, Ethernet cable, and computer NIC are not supplied with the system.

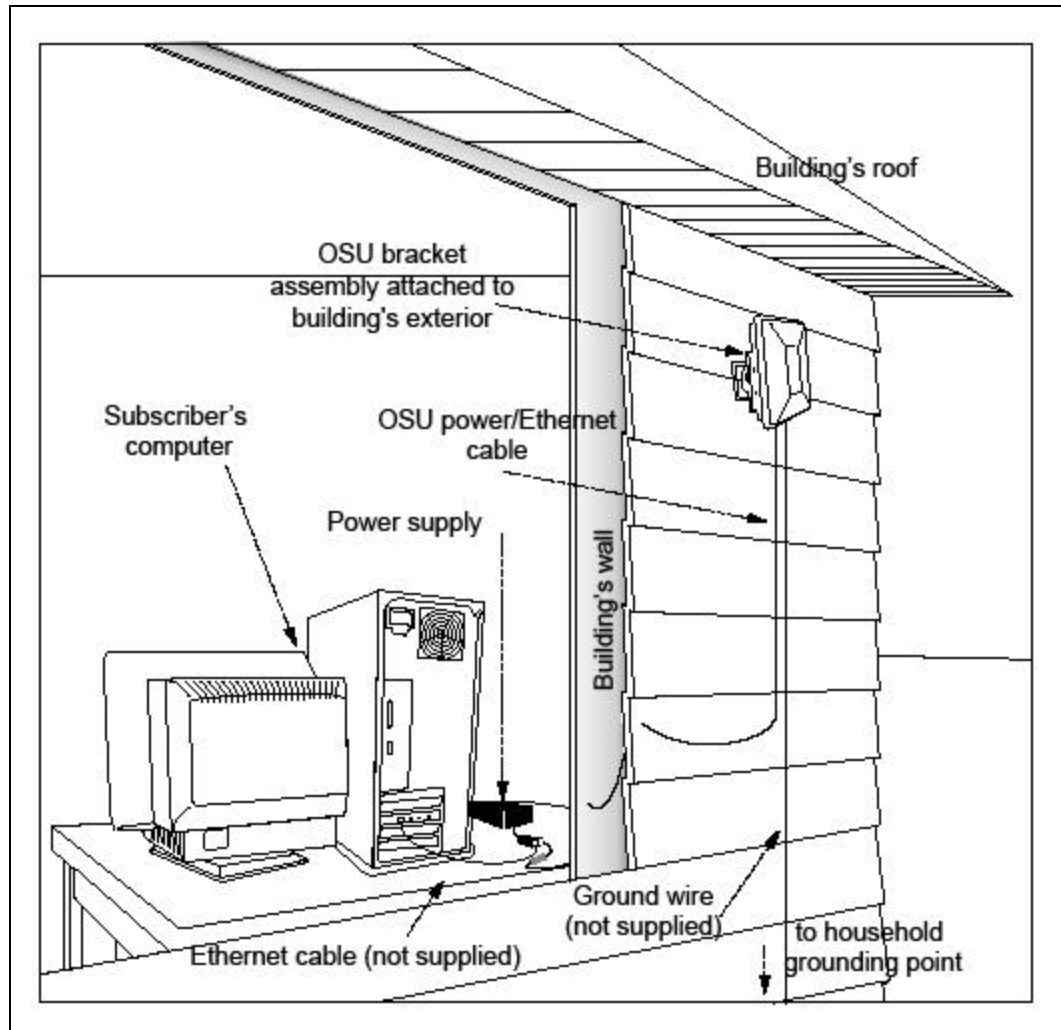


Figure 4 Connecting cables overview

# Installing the OSU

---

This section describes how to find an appropriate installation location for the OSU and how to install the OSU on the building.

## Selecting an installation location for the OSU

It is recommended that you determine the optimum installation location for the OSU before physically mounting the OSU to the building.

Most often if you mount the OSU on the side of the building facing the service provider's base station, the OSU can detect adequate signal in order to provide high-speed Internet access. However, unless there is an obvious line of sight to the correct base station, the correct orientation of the OSU is often not apparent. There also may be practical reasons why you cannot mount the OSU on the side the building that faces the base station.

To determine the best location to install the OSU on the building:

- 1 Make sure the OSU has power, so that the lights on the bottom of the OSU blink.
- 2 Point the front of the OSU in the direction that you think the OSU should be oriented.
- 3 Try pointing the OSU in several different directions. If necessary, perform this task while standing in the building's upper stories or on the roof. At each elevation and in each direction you point the OSU, note the number of blinking lights on the bottom of the OSU. The stronger the signal that the OSU can detect, the more lights blink.
- 4 You can refine your connection to the service provider by adjusting the horizontal and vertical tilt of the OSU, as described in the section, "Adjusting the OSU's vertical and horizontal tilt" on page 7.

After determining where signal can be detected around the building, you can then choose a corresponding OSU installation location on the building.

## Installation overview

After you have found the best installation location on the building, install the OSU as follows:

- 1 Complete the mounting bracket assembly, leaving the screws on the bracket arm slightly loose. If the screws are too tight, you won't be able to adjust the OSU's vertical and horizontal tilt later.  
  
If you are fastening the OSU to a pole, add the pole clamp to the assembly. Otherwise, set the pole clamp aside.
- 2 Perform one of the following:
  - a If you are attaching the OSU to the side of a building, attach the CPE to the building using the bracket assembly's wall bracket.
  - b Mount the OSU to the pole, using the bracket assembly's wall bracket and pole clamp.
- 3 Adjust the OSU's vertical and horizontal tilt so the OSU can obtain the best signal.
- 4 Fully tighten the bracket assembly into the desired position.

The following sections describe these steps in greater detail.

## Completing the mounting bracket assembly

- 1 Attach wall bracket 1 to the back of the OSU by screwing the four, 1/4-20 screws, lock washers, and flat washers through the holes in the wall bracket and into the corresponding holes on the back of the OSU.
- 2 Attach one end of the bracket arm to the arch on wall bracket 1.
  - a Insert a 5/16 x 1 1/2 hex bolt into the arch of the wall bracket that you attached to the OSU in step 1. Ensure that the head of the medium hex bolt rests inside the bolt jam of the arch.
  - b Guide the rest of the bolt through the wall bracket's arch.
  - c Slide a toothlock washer on the end of the hex bolt.
  - d Align the hole on one tab of the bracket arm with the end of the bolt.
  - e Slide the bracket arm tab onto the bolt, then place a flat washer over the end of the bolt.
  - f Tighten the end of the bolt with a hex nut. Leave the hex nut loose enough so that you can adjust the vertical tilt of the OSU later, as described in the section "Adjusting the OSU's vertical and horizontal tilt" on page7.
- 3 Attach the other end of the bracket arm to wall bracket 2.
  - a Insert a 5/16 x 1 1/2 hex bolt into the arch of the wall bracket 2. This is the bracket that will be attached to the wall, or that will be clamped to a pole.  
Ensure that the head of the hex bolt rests inside the bolt jam found on the arch.  
When assembly is complete, note that the bolt jam is facing the ground.
  - b Guide the rest of the bolt through the wall bracket's arch.
  - c Slide a toothlock washer on the end of the hex bolt.
  - d Align the hole on the tab of the bracket arm with the end of the bolt.
  - e Slide the tab of the bracket arm onto the bolt, then place a flat washer over the end of the bolt.
  - f Tighten the end of the bolt with a hex nut. Leave the hex nut loose enough so that you can adjust the horizontal tilt of the OSU later, as described in the section "Adjusting the OSU's vertical and horizontal tilt" on page7.
- 4 If you are fastening the OSU to a pole, loosely attach the clamp to wall bracket 2.  
Complete the steps in the section "Fastening the OSU and mounting bracket assembly to a pole" on page8.

## Adjusting the OSU's vertical and horizontal tilt

Because the bolts connecting the two pole/wall brackets to the bracket arm are not yet fully tightened, you can use the bracket arm to adjust the OSU's vertical and horizontal tilt. This adjustment helps the OSU obtain the strongest signal from the service provider.

- 1 You can adjust the horizontal tilt of the OSU by rotating the bracket arm along the bolt that connects the bracket arm to the plate attached to the back of the OSU.  
Move the OSU to the left and right. Note if the number of lights lit on the bottom of the OSU increases. If so, remember the tilt of the OSU when the most lights are lit.
- 2 You can adjust the vertical tilt of the OSU by rotating the bracket arm along the bolt that connects the bracket arm to the plate drilled into the wall. Move the OSU up and down. Note if the number of lights lit on the bottom of the OSU increases. If so, remember the tilt of the OSU when the most lights are lit.

After finding the strongest signal from the service provider, tighten all the bolts on the mounting bracket assembly. When the screws are fully tightened, the OSU will no longer move sideways, nor up and down.

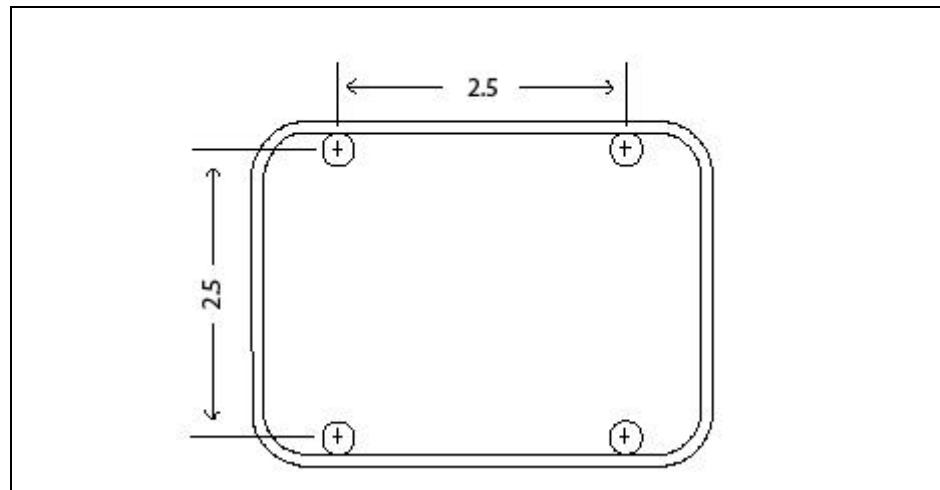
## Attach the OSU and mounting bracket assembly to the outside of the building

- 1 Where possible, install the OSU on the side of the building that has the greatest exposure to the communications tower of the service provider.

The service provider can provide information about tower locations that can provide the OSU with greatest signal exposure.

- 2 In the place on the wall where you want to hang the OSU, drill holes into the building's exterior.
  - Drill the two top holes 2.5 inches apart. Drill the bottom holes 2.5 inches below the top holes. Figure 5 provides a pattern for drilling the holes.

**Figure 5** Drilling pattern for building/wall installation



- If possible, drill one upper hole and its corresponding lower hole into a stud. Do not allow the OSU to be supported by the building's siding only.
  - If installing the OSU on a brick or masonry surface, use appropriate anchors.
- 3 After the holes are drilled into the building, drive the screws through the holes on the wall bracket and into the building.

As you attach the bracket assembly to the wall, make sure the bottom of the OSU is pointing toward the ground. The bottom of the OSU is the side with the five lights, and the grounding lug. The OSU must be installed vertically.

## Fastening the OSU and mounting bracket assembly to a pole

If you are fastening the OSU to a pole, add the pole clamp to the assembly.

- 1 Insert the large hex bolt, the large split washer, and the large washer through the holes on the clamp.
- 2 Place the clamp around the pole.
- 3 Align the screw assembly with the center holes on the wall bracket.

- 4 Tighten the clamp so the bracket assembly and attached OSU are tight on the pole.

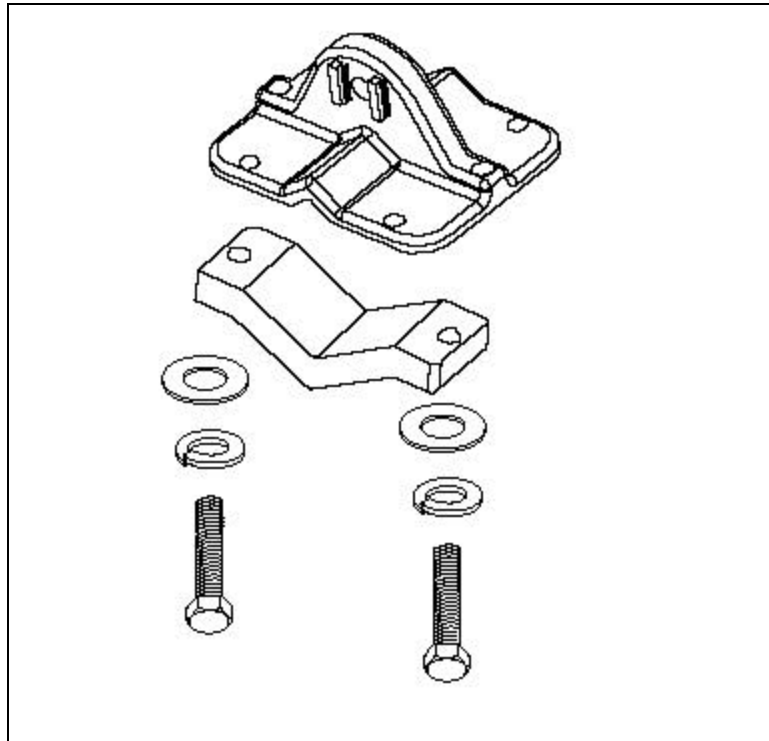


Figure 6 Pole clamp and tightening clamp screws

## Connecting Ethernet / power cable to OSU

---

- 1 Cut an as-needed length of outdoor-rated category-5 Ethernet cable for chosen the installation site. The maximum cable length is 200 feet.
- 2 Terminate the cable using standard RJ-45 connectors.
- 3 To access the Ethernet connector compartment inside the OSU, open the Ethernet connector door:
  - a Unscrew the small screws at the bottom of the connector door.
  - b Flip the door up toward the top of the OSU.
- 4 Coat the end of the Ethernet connector with silicone grease.
- 5 Plug the grease-coated end of the Ethernet/power cable into the jack inside the Ethernet connector compartment.
- 6 Make sure the Ethernet / power cable will fit snugly in the U-shape cable relief of the Ethernet connector door.
- 7 To shut the Ethernet connector door, flip the door down toward the bottom of the OSU and tighten the door's small screws.
- 8 Run the Ethernet / power cable down along the building.
- 9 Fasten the cable to the building according to local building codes.

## Running cables through building's wall

---

The power/Ethernet cable runs from inside the building to the OSU.

- 1 In the desired location, drill a 3/4 inch (18 mm) hole through the wall.
- 2 Draw one end of the category 5e cable through the hole.
- 3 Route the category 5e power/Ethernet cable to the location where the power supply is to be plugged in.
- 4 After completing the installation, seal the hole with a silicone or acrylic caulking material.

## Connecting the ground wire

---

The OSU must be grounded to a household ground point or to a grounding rod according to the applicable electrical code.

Ground the OSU using one of the following methods:

- If you are grounding an OSU installed below the roof line, connect the OSU to the building's ground point. Then attach all wires to the building by using electrical staples. Use drip loops as needed.
- If you are grounding an OSU that is installed above the roof line:
  - 1 Connect the ground wire from the OSU to the ground rod in the ground next to the building.
  - 2 Connect the ground rod to the household ground point according to the applicable electrical code.
  - 3 Attach all wires to the building by using electrical staples. Use drip loops as needed.

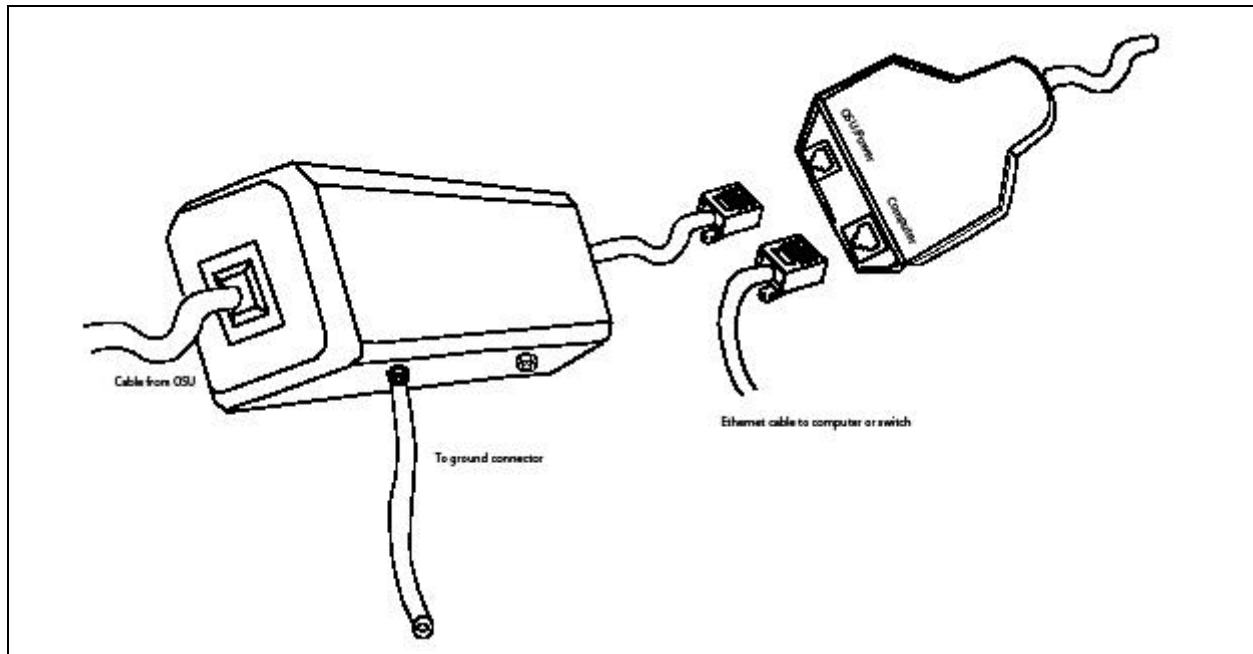
# Installing a data line protector

It is recommended that you use a data line protector to connect the OSU to the user's LAN or computer, particularly in installations of the OSU above the roof line. The data line protector provides protection against static electricity and momentary lightning surges on the OSU cable and the subscriber's LAN, to the OSU, the user's computer, and other devices that may be connected to the local Ethernet LAN.

The recommended data line protector can be ordered from Motorola, using the part number 585-9000-3414.

Figure 7 illustrates how the cables are connected through the data line protector and into the power supply cord.

**Figure 7** Data line protector wiring diagram



**Note:** So that the data line protector can provide protection to the OSU and user's LAN-connected equipment, the furnished ground cable must be connected to a good earth ground or equivalent as required in article 250 of the National Electric Code. Failure to provide correct grounding to the data line protector could result in damage to the user's computer or LAN-connected equipment.

## Plugging in the power supply

---

- 1 Plug the category 5e cord from the OSU into the jack labelled “OSU/power” on the power supply.
- 2 Use a standard, category 5e Ethernet cable to connect the computer to the jack labelled “computer” on the power supply.

---

**Caution:** Make sure that the cable from the OSU and category 5e Ethernet cable to the computer or network hub are connected to the correct jacks as described in the section “Installing a data line protector,” in this manual. **If the cables are not connected correctly the OSU will not work, and damage to the user’s computer could result.**

---

- 3 The power cord uses standard household power. Plug the power cord in the power source.
- 4 Remembering the strongest signal reported, re-orient the front of the OSU in the direction that the OSU was pointed when the strongest signal was found.
- 5 Tighten the bolts fully that hold the OSU in place.

## Setting up the computer to receive an IP address

---

This section describes how to set up various Windows operating systems that might run on the host computer so that the computer can receive an IP address.

You can set up the host computer or router so it can dynamically receive an IP address. If desired, the subscriber can request a static IP address for the host computer or router.

---

**Note:** If the subscriber uses a non-Windows operating system, check help file of the operating system. Most help files explain how to set up a system to use a static or dynamic IP address.

---

### Windows 95, Windows NT, Windows 98, Windows ME: Setting up the network connection

- 1 From the **Start** menu, select **Settings**. Then select **Control Panel**.
- 2 In the window that appears, double click the **Network** icon.
- 3 Select the TCP/IP entry for the NIC.
- 4 Click **Properties**.
- 5 Select the **IP Address** tab.



- 6 Perform one of the following:
  - To set up the host computer to dynamically receive an IP address from the service provider, activate the **Obtain an IP Address automatically** radio button.
  - To set up the host computer to have a static IP address:
    - a Activate the **Use the following IP address** radio button.
    - b In the **Use the Following IP Address** group, complete the fields, as appropriate.
- 7 To close the windows, click **OK**.
- 8 Turn off your computer.

## Windows 2000: Setting up the network connection

- 1 From the **Start** menu, select **Settings**. Then select **Network and Dial-up Connections**
- 2 Right click the connection you want to alter; that is, the name of your NIC. From the pop-up menu, select **Properties**.
- 3 The Local Area Connection Properties window appears. Select the **Internet Protocol (TCP/IP)** item. Click **Properties**.
- 4 Perform one of the following:
  - To set up the host computer to dynamically receive an IP address from the service provider, activate the **Obtain an IP Address automatically** radio button.
  - To set up the host computer to have a static IP address:
    - a Activate the **Use the following IP address** radio button.
    - b In the **Use the Following IP Address** group, complete the fields, as appropriate.
- 5 To close the window, click **OK**.
- 6 On the remaining open window, click **OK** again.
- 7 Turn off your computer.

## Windows XP: Setting up the network connection

- 1 From the **Start** menu, select **Settings**. Then select **Network Connections**.
- 2 Right click the connection you want to alter; that is, the name of your NIC. From the pop-up menu, select **Properties**.
- 3 The Local Area Connection Properties window appears. Select the **Internet Protocol (TCP/IP)** item. Click **Properties**.
- 4 Perform one of the following:
  - To set up the host computer to dynamically receive an IP address from the service provider, activate the **Obtain an IP Address automatically** radio button.
  - To set up the host computer to have a static IP address:
    - a Activate the **Use the following IP address** radio button.
    - b In the **Use the Following IP Address** group, complete the fields, as appropriate.
- 5 To close the window, click **OK**.
- 6 On the remaining open window, click **OK** again.
- 7 Turn off your computer.

# Configuring IP address assignment for routers

---

For instructions on how to assign a static IP address to a router, or to set up the router to use DHCP to receive an IP address, refer to the documentation that accompanied the device.

## Connecting to the Internet

---

To connect to the Internet:

Start your Internet browser, and try to open a few Internet sites.

- If you can open numerous sites, enjoy your new, high-speed service.
- If you cannot open any sites—for example if your browser displays a message “This page cannot be displayed” for all the sites you tried to access—restart the computer.

## Refreshing the OSU’s connection

---

When you refresh the OSU’s connection, your service provider is assigning your computer a new IP address. You need to refresh your OSU’s connection with your service provider when your Internet browser does not let you open any Internet sites.

### Windows users: Refreshing the connection

The OSU’s connection is refreshed when you restart the computer.

### Non-Windows users: Refreshing the connection

If you do **not** run the Windows operating system, you can reboot your computer to refresh the connection. You may want to refer to your operating system’s help files to determine if other methods exist to refresh the connection (that is, to find a method for refreshing the IP address).

## Connecting the OSU to a network

---

---

**Note:** Use **only one** OSU on a LAN. Do **not** use multiple OSUs on the same network.

---

To directly connect the OSU to a computer, use an Ethernet cable (also known as a straight-through cable).

However, to connect the OSU to a hub or switch, use an Ethernet cable appropriate for your network device. This might be a straight through or cross-over cable, depending on how your network device switches signals. When determining how to set up your network, remember that the OSU device operates as a hub or a bridge.

After connecting the OSU to the network device, power the OSU and scan for a service provider signal, as described in earlier sections of this guide.

# FCC / Industry Canada Information



NOTICE: This equipment has been tested and found to comply with the Radio Frequency Radiation Exposure Limits detailed below. A minimum of 20 centimetres (8 inches) separation between the OSU and the operator and all other persons should be maintained.

This product complies with the requirements for Radio Frequency Radiation Hazard as defined in the FCC rules 47CFR1.1307 and 47CFR2.1091 and Industry Canada Standard RSS-102. Additional information about Radio Frequency Radiation Exposure can be found on the FCC web site ([www.fcc.gov](http://www.fcc.gov)) and the Canada web site (<http://canada.gc.ca/>).

## Radio Frequency Radiation Exposure Limits (Table 1)

Table 1 Limits for Maximum Permissible Exposure (MPE)

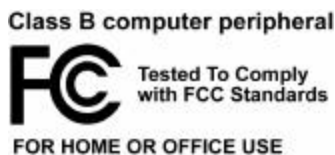
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (Minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
1500-100,000	---	---	6	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
1500-100,000	---	---	1.0	30

NOTE 1 to Table 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 to Table 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

## Declaration of Conformity Compliance Information

Outdoor Subscriber Unit Model Numbers: OSU-2510-R



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.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## Declaration of Conformity Responsible Party:

Motorola, Inc.

2900 West County Road 42, Suite 120

Burnsville, MN 55337

952-929-4008

NOTE: 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 or more 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 dealer or an experienced radio/TV technician for help.

NOTE: Modification of this device may void the user's authority to operate the equipment.

## RENSEIGNEMENTS D'INDUSTRIE CANADA ET DE LA FCC



AVIS : Cet appareil a été soumis à des essais et s'est révélé conforme aux exigences relatives aux limites d'exposition aux radiofréquences de la FCC et d'Industrie Canada. Une distance d'au moins 20 centimètres (8 pouces) doit être maintenue entre le modem sans fil et l'opérateur ainsi que toute autre personne.

Ce produit est conforme aux exigences relatives aux dangers des radiofréquences tels que définis dans les règlements 47CFR1.1307 et 47CFR2.1091 de la FCC et dans la norme RSS-102 d'Industrie Canada. Pour obtenir de plus amples renseignements au sujet de l'exposition aux radiofréquences, consultez le site Web de la FCC ([www.fcc.gov](http://www.fcc.gov)) ainsi que celui du gouvernement du Canada (<http://canada.gc.ca/>).

Limites d'exposition aux radiofréquences (tableau 1)

Tableau 1 Limites d'expositions maximales permises (EMP)

Gamme de fréquences (MHz)	Puissance du champ électrique (V/m)	Puissance du champ magnétique (A/m)	Densité de puissance (mW/cm <sup>2</sup> )	Temps d'intégration (Minutes)
<b>(A) Limites d'expositions professionnelles ou contrôlées</b>				
1500-100,000	---	---	6	6
<b>(B) Limites d'expositions de la population en général ou pour les expositions non contrôlées</b>				
1500-100,000	---	---	1.0	30

NOTE 1 du tableau 1 : Les limites d'expositions professionnelles ou contrôlées s'appliquent dans les situations où des personnes sont exposées dans le cadre de leur emploi pourvu que ces personnes soient parfaitement conscientes de la possibilité d'une telle exposition et qu'elles aient un contrôle sur leur exposition. Les limites d'expositions professionnelles ou contrôlées s'appliquent également dans les situations où une personne doit traverser un lieu où des limites d'expositions professionnelles ou contrôlées s'appliquent pourvu que cette personne ait été mise au courant du risque d'exposition.

NOTE 2 du tableau 1 : Les expositions de la population en général ou les expositions non contrôlées s'appliquent dans les situations où le public en général est susceptible d'être exposé, ou dans les situations où des personnes qui sont exposées dans le cadre de leur

emploi ne seraient pas totalement prévenues du potentiel d'exposition ou ne pourraient pas avoir de contrôle sur leur exposition.

Déclaration de conformité

Numéros de modèle des appareils d'abonné extérieurs:OSU-2510-R



Le présent dispositif est conforme à la section 15 des règlements de la FCC. Son utilisation est soumise aux deux conditions suivantes : (1) ce dispositif ne doit pas causer de brouillage préjudiciable, et (2) ce dispositif doit accepter toute interférence reçue, y compris les interférences qui peuvent causer un type de fonctionnement non voulu.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This Class B digital apparatus complies with Canadian ICES-003.

Responsable de la déclaration de conformité :

Motorola, Inc.

2900 West County Road 42, Suite 120

Burnsville, MN 55337

952-929-4008

AVIS : Le présent équipement a été testé et reconnu conforme aux limites applicables aux appareils numériques de classe B, en vertu de la section 15 des règlements de la FCC. Ces limites sont conçues pour assurer une protection raisonnable contre les interférences en situation résidentielle. Cet équipement génère, utilise et peut irradier des signaux électroniques de fréquences radio. Si le dispositif n'est pas installé et utilisé conformément aux instructions, il peut causer une interférence avec les communications radio. Toutefois, rien ne garantit que l'interférence ne se produira pas dans un cas particulier. Si cet équipement cause un brouillage préjudiciable à la réception radio et télévision, qui peut être déterminé en éteignant et en allumant l'équipement, l'utilisateur est invité à essayer de corriger l'interférence au moyen de l'une ou de plusieurs des mesures suivantes :

- Réorienter ou déplacer l'antenne de réception ;
- Accroître la distance entre l'équipement et le récepteur concerné ;
- Brancher l'équipement et le récepteur concerné dans des prises de courant sur des circuits distincts ;
- Consulter le distributeur ou un technicien électronique expérimenté pour obtenir de l'aide.

NOTE : Toute modification de cet appareil peut annuler l'autorisation de l'utilisateur à le faire fonctionner.

# INDEX

## C

- cable diagram 5
- cat 5e cable
  - plugging in 12
  - running through house 10
- computer
  - NIC requirement 1
- cross-over cable 14

## G

- ground wire
  - connecting 10
- grounding rod 1
- grounding wire
  - recommended 1

## I

- IP address
  - renewing 14
- IP address (host computer)
  - refreshing 14

## L

- LAN
  - connecting to OSU 14

## M

- mounting bracket
  - attaching to house 8

## N

- network device
  - connecting to OSU 14
- NIC requirement 1

## O

- OSU
  - choosing installation location 1
  - connecting to network 14
  - minimum separation distance of equipment and persons 15

## R

- router
  - connecting to OSU 14

## S

- switch
  - connecting to OSU 14

