

WildBlue Installation and Service Call Standards Document

WildBlue only releases payments for successful WildBlue Professional Installations, which may include Standard and/or Exception activities.

This document first outlines the Standard Installation Requirements (Section 1.1) that provides a detailed list of required installation standards. Then it outlines complete installation processes in the Standard Professional Installation (Section 1.2) that provides the detail of the activities involved in a standard professional installation.

Finally, this document outlines the exception activities that may complement the standard professional installation in Section 1.3., Standard Professional Installation Exceptions.

Section 1.4., Standard WildBlue Professional On-site Service Call and Section 1.5., Standard WildBlue Professional On-site Service Call Exceptions outline the standard and non-standard service call on-site support activities.

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1.1. WildBlue Professional Standard Installation Requirements

- **Complete Installation Planning with Customer:** To provide notification to customer of any non-standard charges prior to commencement of work, complete the WildBlue Communications Site Survey Form (leave a copy with the customer):
 - *Review all the customer information fields with the customer.*
 - Confirm Customer and Installer Information
 - Confirm Outdoor Unit (ODU) mounting location
 - Verify Line-of-sight (LOS)
 - Locate the utility ground
 - Determine Cable Routes
 - Determine location for the Indoor Unit (IDU) and verify customer's PC
 - *Site ready to receive WildBlue Service:* Confirm site ready for installation without any non-standard work or materials. Post the data on the form, then review the installation data with the customer to confirm the ODU, utility ground, cable route, and IDU locations, along with the PC requirements. Obtain the customer's signature before proceeding with installation of the antenna.
 - *Customer agrees site has a LOS defect but site will currently support WildBlue Service:* The site as a LOS defect but will support WildBlue Service at the time of installation: Post defect on the Site Survey Form, and then review the defect with the customer. **(Defects are things that may interfere with WildBlue service in the future; i.e. tree growth, roof mount may cause leaks over time)** Obtain the customer's signature before proceeding with the installation of the antenna.
 - *Site not able to receive WildBlue Service:* Post the problems that make the site unsuitable for WildBlue service installation on the Site Survey Form, and then review the problems with the customer. Obtain the customer's signature before leaving premise.
 - *Site not ready to receive WildBlue Service:* Post additional or non-standard installation work that makes the site not ready on the Site Survey Form. Document and review with the customer any additional work and/or materials the customer must provide before installation, including PC upgrades, if necessary. Document and review with the customer any additional work and/or materials **(along with associated costs)** that the installer will provide on or before the day of installation. Obtain the customer's signature before proceeding with installation preparation or antenna installation. Do not begin any antenna installation until the additional work and/or materials listed are available and/or installed.

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- **Proper Electrical Compliance:**
 - All aspects of installation are in full compliance with the National Electric Code.
 - All aspects of the installation are in full compliance with any and all applicable state and local codes
 - All aspects of the installation are in full compliance with all WildBlue specifications.
- **Properly Mounted Antenna:**
 - All antenna must be mounted a minimum of 5 feet off the ground and out of reach to small children
 - All antenna are mounted less than 21 feet from the ground (see **Standard Professional Installation Exceptions (section 1.3 of this document) for mounts 21 feet or over**)
 - Wall mounts require structurally sound surfaces that can support the weight of the mount and the antenna. (**Approved surfaces are panel or lap siding, brick or poured concrete or hollow cinder block, or deck rail mounts using the WildBlue Communications Metal Rail Mounting Kit (future offer)**) In addition, all screws must penetrate through the building siding into a stud, joist, or truss. Finally, screws inserted into masonry surfaces must be installed at least 2” away from the mortar joint (never in the mortar joint), using the appropriate anchors. The wall mount bracket must be at least 12” from the edge of the wall, window casement, and/or doorframe.
 - Sloped Roof mounts require structurally sound surfaces that can support the weight of the mount and the antenna. (**Slate or shake shingles are not approved surfaces**) Install roof mounts on the overhang section of the roof whenever possible. In addition, install all screws through the roofing and roof decking to penetrate the roof truss or joist.
 - Pole mounts require a pole of sufficient length to bury the pole no less than 30” deep, while rising at least 5’ above the ground and anchored with at least 120 lbs of quick setting concrete. While mounting the antenna on a pole is part of a standard installation, the installation of the pole itself is not. (see **Standard Professional Installation Exceptions (section 1.3 of this document) for information about Pole installation**)
- **Properly Aligned Antenna:**
 - Correct assembly of the WildBlue Satellite Antenna using WildBlue’s specifications.
 - Properly pointed and peaked antenna using the WildBlue Band-pass Filter and a Satellite Signal Level Meter.
 - The acquired Satellite Signal at the Satellite Modem.
- **Properly Cabled Service:**
 - Provide an End-to-end COAX connection from the Satellite Modem to WildBlue Satellite Antenna.
 - Provide an Ethernet connection from the Satellite Modem to the customer’s computer using an approved WildBlue Ethernet RJ45-to-RJ45 Ethernet cable.
 - COAX cable rout includes drilling through one exterior wall and/or one interior wall or floor. (see **Standard Professional Installation Exceptions (section 1.3 of this document) for routs that require additional drilling**)
 - All ground/pole mount cabling is a minimum of 6 inches below ground level, enclosed in ½-inch PVC conduit.
 - The installer will not use flooded cable in any portion of the installation.

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- Installation of COAX cable and service/drip loops conforms to manufacturer and WildBlue's specifications. All outside cable connections/building penetration points have service/drip loops that conform to a minimum bend radius of 5 3/4 inches.
- Secure visible cable along appropriate structural lines using screw-type Single/Dual Flexible Cable Clips or Vinyl Siding Cable Clips.
- Installer provides up to 150 feet of WildBlue approved RG-6 2.2 MHz cabling. (see Standard Installer Provided Materials in this section for cable costing.)
- Maximum COAX cable length does not exceed 150 feet. (Including Indoor COAX Extension Cables)
- Installer will attach Tape-Labels each end of every COAX cable length; both transmit and receive. (Tape Label: Red for Receive and Green for Transmit)
- The installer will build and install two appropriate length and Tape-Labeled COAX Extension Cables for each installation: one for transmit and one for receive.
- Properly test installed using a Volt-ohm meter and Alligator Test clips before connected to the WildBlue antenna or the WildBlue Satellite Modem.
- **Properly Ground/Bonded Antenna:**
 - The installer provides a WildBlue approved 2.2 GHz Grounding Block that is installed in all COAX cable runs
 - Grounding requirements for the 2.2 GHz Grounding Block:
 - Less than 20 feet: #10 copper or #8 Aluminum grounding wire terminated in an approved building ground.
 - Greater than 20 feet: Install an 8-foot Grounding Rod between the antenna mount location and the approved building ground location. #6 copper wire is used to bond the grounding rod to the ground block and/or pole, if necessary, to the building ground. (While this ground/bond is a standard requirement, the materials and installation of the grounding rod and #6 copper wire are not. (see Section 1.3. Standard Professional Installation Exceptions))
 - Installer must provide and install (per WildBlue instructions) the following Dish grounding materials:
 - #10 Ring Tongue Ground Lug
 - 5/16 Ring Tongue Ground Lug
 - #10-32 1/4 inch screw
 - 12 inches of sheathed #10 copper wire, #8 aluminum, or #17 copper coated steel wire
 - Approved building grounds:
 - Metal electrical service panel
 - Metal electrical raceway or conduit
 - A metal water pipe that is with five feet of the entry the water service and in earth contact for at least 10 feet before entering the building.
 - Electrical service electrode or conductor that connect the electrical service grounding system.
 - In metal or steel structure the metal frame can provide ground.
 - All antenna ground/bond installations must meet the minimum WildBlue standards, but also must meet all federal, state, and local ground/bond requirements.

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- **Properly Connected Service:**
 - The installer will use *only approved parts*. All F Connectors must be approved 2.2 MHz Compression Connectors installed using an approved Compression Tool. The installer will not use Crimp Connectors in any part of the installation.
 - *Indoor COAX cable terminations* are properly dressed:
 - *Floor connections* use Feed-through Bushings leaving 3 inches of COAX Feed Cable above the floor with each cable equipped with a Tape-label for either Transmit or Receive and Female-to-Female connector.
 - *Wall connections* use Dual Wall Faceplates with one connector labeled TX for transmit and one connector labeled RX for receive.
- **Properly Managed Structural Penetrations:**
 - *Outdoor, 45-degree* upward angle structural penetrations are weather sealed with appropriate silicone.
 - *Outdoor, 90-degree* structural penetrations require 5 3/4 inches radius service loops, Feed-through Bushings, and are weather sealed with appropriate silicone.
 - All structural penetrations required for Mounting Bracket are *appropriately sealed*
 - *Indoor structural penetrations* for COAX cable support the minimum bend radius of 5 3/4 inches.
- **Complete Customer Account Activation:**
 - The installer and the customer have successfully *completed the WildBlue Satellite Modem provisioning* process.
 - The installer has *properly configured DHCP* on the customer PC
 - The installer has *properly configured the browser* on the customer PC
 - The installer has *set the customer PC browser homepage* to the customer portal (www.wildblue.net for WildBlue ISP customers)
 - The installer has *set a browser bookmark* for the customer the support page (<http://help.wildblue.com> for WildBlue ISP customers)
 - Installer has *activated the customer Email account*
 - Installer has *configured the PC Email client* for one Email account
- **Provide Customer Training:**
 - Installer *provides at least 15 minutes of customer education* on system operation and features.
 - Training includes:
 - *Showing the customer the support page*
 - *Demonstrating internet browsing*
 - *Demonstrating Email access*
 - *Showing the access the to Email account feature area.*
- **Standard Installer Provided Material:**
 - The installer provides, at *no charge to the customer, up to 100 feet of 2.2 MHz RG-6 COAX cable*. The customer pays for additional cable-feet over 100 feet.
 - The installer *provides all installation hardware necessary to mount, wire, ground, receive, and transmit* the WildBlue service without additional charges to the customer.
 - The installer *provides all approved 2.2 MHz Compression Connectors F Connectors, Female-to-Female adapter, and Dual Wall Plates.*

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- **Proper Installation Completion:**
 - Installer *obtains appropriate customer signature* on:
 - Installation Completion Form
 - 12 Month Service Agreement
 - *Clean up* any mess made during installation and remove all installation debris (cable scraps, wire ends, packaging, boxes) from the customer premise

Activities that supplement the WildBlue Professional Standard Installation Requirements are provided during installation, with extra customer charges, in alignment with the Standard Installation Exceptions

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1.2. Standard Professional Installation

- Travel to and from customer location within 50 miles of installer office
- Complete installations must meet all the WildBlue Professional Standard Installation Requirements as outlined in Section 1.1 of this document:
 - Complete Installation Planning with Customer
 - Proper Electrical Code Compliance
 - Properly Mounted Antenna
 - Properly Aligned Antenna
 - Properly Cabled Service
 - Properly Ground/Bonded Antenna
 - Properly Connected Service
 - Properly Managed Structural Penetrations
 - Complete Customer Account Activation
 - Provide Customer Training
 - Standard Installer Provided Material
 - Proper Installation Completion
- Before an installer payment a copy of the signed Installation Completion Form, containing all customer initials, is left with the customer and a copy is provided to the proper support billing organization.
- The Installer and/or their support billing organization are responsible for processing the billing for all Standard Professional Installation Exceptions added to the Installation Completion Form.
- For all Dead on Arrival (DOA) equipment: Installer completes the Installer Return Merchandise Authorization (RMA) Request form and packs the completed form in the same box as failed equipment. Installer ships failed equipment to the appropriate source organization that manages the WildBlue RMA process.

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1.3. Standard Professional Installation Exceptions

The Standard WildBlue Installation does not include the following and additional charges may apply.

- Travel to and from customer location over 50 miles of installer office is billed to the customer on a per-mile basis.
- Installation of WildBlue antenna at a location on the customer structure 21 feet or higher above the ground and not accessible from a 25-foot ladder
- Extra approved WildBlue RG-6 or RG-11 cabling over the maximum of 150 feet.
- Drilling through more than one exterior wall and/or more than one interior wall or floor
- Any materials used to hide exposed cabling
- Non-penetrating roof mounts and chimney mounts
- Non-standard roof or wall mounts
- Installation of pole and conduit for pole mount installation (pole must be long enough to place the dish 5-feet above the ground)
- Providing and installing the Grounding rod and #6 Bond wire when the Grounding Block is over 20 feet from the approved building ground. (see Properly Ground/Bonded Antenna in section 1.1)
- Removal and/or repair of previously mounted equipment with a Waiver of Liability signed off by customer (this is never done without the Waiver of Liability)
- Customer requested installation of complex cabling, including excess cabling requirements, wall fishes, or Ethernet networking: to include wired and wireless configurations.
- Installation and/or configuration of a Local Area Network that supports multiple computers or connections, wired or wireless

Additional installation charges may be applicable and must be determined and agreed upon between customer and premise installer prior to beginning work. Document all intended additional work on the WildBlue Site Survey Form and the Installation Completion. Obtain customer signature, prior to ordering materials or beginning work.

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1.4. Standard WildBlue Professional On-site Service Call

The Standard WildBlue Professional On-site Service Call ensures that the restoration of WildBlue service to working condition that parallels a successfully completed WildBlue standard service installation*. Any and/or all of the following actions may occur during a service call.

- Travel to and from customer location within 50 miles of installer office
- Problem isolation inspection
- Verify site survey and placement of the antenna.
- Re-point the antenna and peak the signal for optimal performance.
- Replace damaged or failed IDU (Modem) or TRIA.
- Ensure the update of WildBlue inventory systems with the replacement TRIA and/or Modem information.
- Ensure all connections from the ODU to IDU to customer computer are intact and secure and meet WildBlue Installation requirements.
- Re-provision replaced IDU.
- Verify TCP/IP settings to ensure connection to the Network
- Verify or complete ISP registration (if customer uses WB ISP).
- Verify or reconfigure a WildBlue approved email client to receive WildBlue ISP email. (if customer uses WB ISP email)
- Verify or reconfigure a web browser to set the WildBlue portal as a home page and create a bookmark for the WildBlue ISP portal page. (if customer uses WB ISP)
- Installer obtains appropriate customer signature on Service Call Reference Form.
- Installer completes the Installer Return Merchandise Authorization (RMA) Request form and packs the completed form in the same box as failed equipment. . Installer ships failed equipment to the appropriate source for managing the WildBlue RMA process.

**Note: The Standard WildBlue Service Call does not cover any non-standard work agreed upon between the customer and the premise installer as part of the initial installation (see section 1.3 Standard Professional Installation Exceptions for a listing of non-standard work).*

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1.5. Standard WildBlue Professional On-site Service Call Exceptions

The Standard WildBlue Service Call does not cover any non-standard work agreed upon between the customer and the premise installer as part of the initial installation (see section 1.3 Standard Professional Installation Exceptions for a listing of non-standard work). Therefore, any non-standard work completed during a Standard WildBlue Service Call is subject to additional fees. Additional Service Call charges may be applicable and must be determined and agreed upon between customer and premise installer prior to beginning work. Document all intended additional work on the Standard WildBlue Service Call Form with customer signature, prior to beginning work.

- Repairs to a WildBlue antenna at a location 21 feet or above the ground and not accessible from a 25-foot ladder
- Repairs to extra approved WildBlue RG-6 cabling over one hundred feet
- Drilling through more than one exterior and/or more than one interior wall or floor
- Any materials used to hide exposed cabling
- Replacement and/or repair of the mount bracket, mount pole, or dish
- Removal and/or repair of previously mounted equipment with a Waiver of Liability signed off by customer (this is never done without the Waiver of Liability)
- Repairs to complex or custom installations including excess cabling requirements, wall fishes, networking, etc.
- Repair or reconfiguration of a Local Area Network that supports multiple computers or connections, wired or wireless
- Relocation dish to correct a dish move done by the customer or to accommodate changes in the location (i.e. the customer built or planted something that blocks the LOS)
- Reattachment and/or replacement of damaged or loose indoor and/or outdoor coaxial cabling according to WildBlue Installation requirements