ExpressVu

INSTALLATION GUIDE

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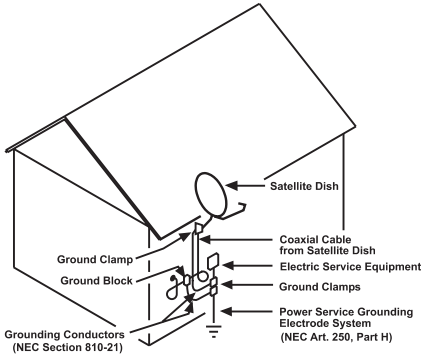
Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or groundingtype plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Do not expose this apparatus to dripping or splashing,or place objects filled with liquid, such as vases, on this apparatus.

Note to Satellite TV System Installer: This reminder is provided to call the satellite TV system installer's attention to Article 820-40 of the *National Electrical Code* (NEC) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.



Safety Tips

- Unplug the receiver from the AC power outlet *before* cleaning.
- The use of accessories or attachments not recommended by the receiver manufacturer will void the *Limited Warranty*.
- Do *not* place the receiver in an enclosure such as a cabinet without proper ventilation.
- Do *not* stack the receiver on top of or below other electronic devices.
- Operate the receiver using *only* the type of power source indicated on the marking label. Unplug the receiver power cord by gripping the power plug, *not* the cord.
- Do *not* overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- *Never* insert objects of any kind into the receiver through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- *Make sure* that the outdoor parts of the antenna system are grounded in accordance with local, state, federal, and *National Electrical Code* (NEC) requirements.
- Do *not* locate the antenna near overhead light or power circuits, or where it can fall into such power lines or circuits.When installing the antenna, take *extreme* care to avoid touching such power lines or circuits, as contact with them can be *fatal*.
- Do *not* attempt to service the receiver yourself, as opening or removing covers may expose you to dangerous voltage, and will void the *Limited Warranty*. Refer all servicing to authorized service personnel.
- Use an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the receiver is left unattended and unused for long periods of time, unplug the power cord from the wall outlet, disconnect the lines between the receiver and the antenna, and disconnect the telephone line. This will provide some protection against damage caused by lightning or power line surges.

Installation and Setup -- A 5 Step Process

INTRODUCTION

Congratulations on your selection of a Bell ExpressVu system. We thank you for your purchase. We are confident that you will be pleased with the performance, capabilities, entertainment options, and ease of operation of your Bell ExpressVu system for many years to come.

Your Bell ExpressVu system complies with MPEG II and DVB standards for compressing audio and video data. How does this benefit you? It means the Bell ExpressVu system will be compatible with new technologies in consumer electronic products as they arrive on the market, including digital video disk (DVD) players, digital video cassette recorders (VCRs), and data communication networks.

The Bell ExpressVu Customer Service Call Center provides a single source for you to get answers to all your questions. For all your questions or comments, call us at 1-888-SKY-DISH (1-888-759-3474), or visit our Web Site at www.expressvu.com.

If you do not want to install your system yourself, you can have it installed by a professional. Ask your retailer for information about the installer in your area. (You will be given a toll-free number. Call the toll-free number and leave a message. The installer will call you back to set an appointment).

If you do intend to install your Bell ExpressVu system yourself, this chapter provides installation procedures. The procedures are relatively simple, but do require some skill in construction-related tasks. Be sure to follow all warnings and cautions; they are provided for your safety.

An optional Installation Kit is available. This Kit includes typical hardware used during installation, and a more detailed Installation Kit Guide. Contact your Bell ExpressVu dealer.

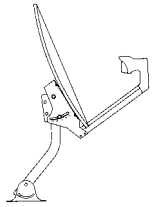
It is important that you follow *all* local building codes and the electrical codes specified by your local electric company, as well as standard safety procedures for installing and working with this type of equipment. Improper procedures or installation can result in damage to the equipment or the building, and harm to you. If you are not sure about whether your installation follows these codes, contact a licensed building inspector or electrician in your area for assistance.

Take extreme care to avoid contacting any overhead power lines, lights, and power circuits while you are installing the satellite antenna. Contact with any of these could prove fatal. Do not install the satellite antenna near power lines.

See "Safety Instructions" on page I-i for additional safety information.

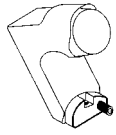
COMPONENTS OF THE SATELLITE ANTENNA

Note: The following pictures are not to scale.

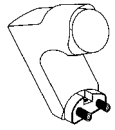


The fully assembled Bell ExpressVu satellite antenna looks like this. See "Install the Satellite Antenna" on page I-13 for the procedure to assemble and install the satellite antenna. Following are descriptions of each component of the satellite antenna.

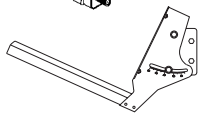
DBS LNBF (Low Noise Block amplifier with integrated Feed)



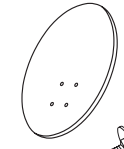
DBS LNBF - Single Output
If you purchased the single-output LNBF to use with one Bell ExpressVu receiver, your package contains this LNBF.



DBS LNBF - Dual Output
If you purchased the dual output LNBF for use with more than one Bell ExpressVu receiver, your package contains this LNBF.



LNBF Support Arm
The LNBF support arm attaches the LNBF and the dish to the mast assembly. The support arm may come in two pieces for larger antennas.



Dish
The dish collects and focuses the satellite signal onto the LNBF.
Note: The dish may have either three or four bolt holes.

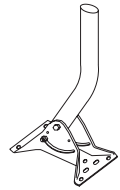
Flathead bolts with nuts attach the dish to the support arm.

LNBF Screws

The LNBF screw attaches the LNBF to the support arm.

Cable Clip (optional)
The cable clip holds the cable to the top of the support arm.

Mounting Brackets and Mast Assembly



The mounting bracket and mast assembly attaches the dish and LNBF assembly to the mounting surface.

If you are planning to use a pole to mount the satellite antenna, you will not need the mounting bracket and mast assembly. However, we recommend you keep them in case you decide to move the satellite antenna.

Optional Installation Kit

The Installation Kit is an optional product that contains the hardware and materials that you would typically use during various types of installation. To buy the Installation Kit, contact the location where your Bell ExpressVu system was purchased or call the Customer Service Call Center at 1-888-SKY-DISH (1-888-759-3474).

The Installation Kit contains the following:

- Dual telephone adapter
- Dual grounding block
- 9.1-meter Grounding wire, either 8 gauge aluminum or 10 gauge copper
- 7.6-meter RG-6 (coaxial) cable with "F" connectors
- 30-meter RG-6 (coaxial) cable with "F" connectors
- 4 concrete anchors (3 1/8" x 1 7/8")
- 2 Lag bolts (3" x 5/16")
- 4 Cable ties
- 4 Lag bolts (2" x 5/16")
- Compass
- Silicone sealant
- 10 Cable clips for the coaxial cable

If you did not purchase the Installation Kit, but still plan to install your Bell ExpressVu system yourself, we recommend that you gather the appropriate materials before beginning installation. **Note:** Amount of RG-6 (coaxial) cable required will depend on distance between LNBF and receiver.

The tools you will need to complete the installation will vary, depending on the type of installation that you do. If you find that you do not have the tools and skills for a certain procedure, call a professional, such as an Bell ExpressVu dealer or an electrician, for assistance. These tools are not included in the Installation Kit.

SUMMARY OF INSTALLATION

Following is a summary of the procedures to install and set up your Bell ExpressVu system. We recommend that you perform the procedures in the order presented.

1. Unpack the satellite antenna, receiver, and parts (see page I-6) and the optional installation kit, if you purchased one (see page I-3).

2. Review "What You Need to Know" (see page I-6).

3. Connect the receiver to your TV set (see page I-8).

4. Determine the approximate location of the Bell ExpressVu satellite (see page I-18).

5. Find the best location on your property for the satellite antenna, with a clear line of sight to the satellite (see pages I-18 through I-20).

6. Assemble the satellite antenna and attach it to a solid surface (see pages I-27 through I-40).

7. Ground the satellite antenna, and wire it to the Bell ExpressVu receiver (see pages I-42).

8. Aim the satellite antenna for the strongest possible signal (see pages I-44 through I-48).

9. Connect the receiver to an active telephone connection (see page I-54). With the receiver wired to the TV and the antenna properly installed, you will be able to see the Bell ExpressVu Program Guide, which tells you about available programs, channels, and services.

10. Order your programming by calling the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH (see page I-57).

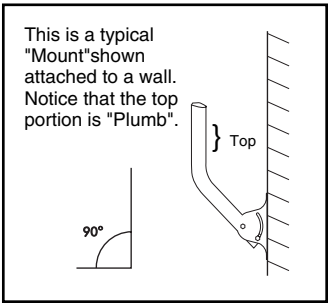
11. Review “Bell ExpressVu Pre-Authorized Payment Plan”. (see page I-58).

12. Program the remote control to control the receiver and your other electronic equipment. This feature is not available on all receiver models. (see page I-60).

13. Wire the receiver to your audio system, VCR, DVD and other electronic equipment, as required (see page I-63).

STEP 1: BEFORE YOU START INSTALLATION

THE KEY TO SETTING UP YOUR SYSTEM EASILY – THIS IS IMPORTANT



The key to setting up the system is in the accurate initial setting of the vertical elevation of the dish. The vertical elevation is the amount of tilt upwards, from horizontal, toward the sky, which is required to "see" the satellite. This is best achieved by mounting the dish support mast so that the top portion, to which the dish clamps attach, is as "Plumb" as possible. That is to say: the top portion of the mount should be as perpendicular to the earth as you can manage - this is true for wall mounting, roof mounting, any kind of mounting. If it is "Plumb", then, when the dish is mounted on it and the dish is tilted upward toward the satellite at the correct vertical elevation angle, the dish can be easily panned (East/West movements) to find the satellite.

UNPACK AND CHECK CONTENTS

As you unpack the system, confirm that all the parts are included. See "Package Contents" on page I-6 for a list of the included components.

Note: Keep the shipping materials in which these items are packed, in case you ever need to return them.

Unpack the contents carefully. Electronic equipment can be easily damaged if bumped or handled roughly. Examine all parts for damage that may have occurred during shipment. If you find any damage, immediately call the location where your Bell ExpressVu system was purchased, or the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH, before continuing with installation.

The size of your dish will vary depending on the part of Canada in which you live. The standard diameter of a Bell ExpressVu dish is 51 cm, however, 60 cm, 90 cm or 1.2m dishes are also available. If you require the large dish, we recommend that you hire a professional to install it because installation of the 90 cm and 1.2 m dishes is a more exacting project.

PACKAGE CONTENTS

- User and Installation Guide
- Bell ExpressVu satellite antenna assembly
- Bell ExpressVu receiver
- Accessories

    - ❒ 7.6-metre RJ11 telephone cable
    - ❒ 2.4-metre phono (RCA) 3-connector cable
    - ❒ 1.8-metre modulator cable
    - ❒ 2.4-metre S-VIDEO cable (optional to install) Model 4700 only.
    - ❒ Remote control, with four (4) AAA batteries packaged separately

In addition, we provide an optional Installation Kit, which includes the necessary hardware and cables that you would typically use during installation. Contact the location where your Bell ExpressVu system was purchased for more information, or call the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH for the location of a licensed dealer near you.

WHAT YOU NEED TO KNOW

Because you will make modifications to the location where you mount the satellite antenna, we suggest that you be familiar with and be able to safely perform the following procedures.

- You should be able to use a plumb line or level to set both horizontal and vertical surfaces. This is especially critical for vertical surfaces.

- You should know how to drill holes in the mounting surface (whether wood, brick, cinder block, etc.).

- You should know how to drill holes and run cabling through your building. This includes sealing the holes once the cable has been installed.

WHAT YOU NEED TO HAVE

If you did not purchase the installation kit, you will need the following materials:

- Coaxial cables and connectors (RG6 recommended up to 100ft. For longer distances consult an installer)
- Fastening devices to attach the mount to your dwelling
- Waterproofing for the outdoor connections
- Grounding materials
- Cable ties

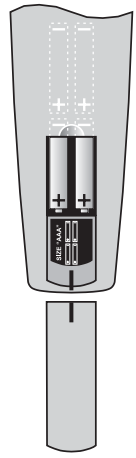
You will also need some tools:

A 7/16”,1/2”, 9/16” wrench (varies with dish size)
A Phillips screwdriver
A spirit level
A drill and drill bits (masonry and wood)
A 3/8” masonry drill bit for the concrete anchors

ATTENTION!

INSTALL BATTERIES IN THE REMOTE

The remote is shipped with four AAA batteries, packaged separately.



1. Press down on the slot in the battery case cover (on the back of the remote) to open the cover.
2. If you are replacing old batteries, remove all four batteries.
3. Insert the new batteries, being sure to match the plus (“+”) ends with the plus indicators on the remote. The batteries alternate plus and minus (“-”) ends when properly seated.
4. Replace the cover by inserting the tabs into the slots, and snapping the cover into place.

If the remote does not work after installing the batteries, confirm that the batteries are properly seated, with the plus and minus ends aligned correctly.

SET THE REMOTE ADDRESS

When you get your receiver and remote, they are set to address 1. Unless you experience problems, you do not need to change the address at this time. If you want to change the address, see “Set the Remote Address” on page I-60.

You may need to set the remote address in any of the following situations:

- You have a UHF remote, and you encounter interference caused by other nearby UHF remotes (for example, a neighbour's UHF remote or a UHF remote being used in another room of your building).
- There is another Bell ExpressVu receiver and remote being used in the vicinity.
  Note: In either of the above situations, you may need to assign an address to your remote and receiver, so that the receiver responds only to that remote.

- If your receiver and remote addresses do not match, you must match them to be able to use the remote. See "Set the Remote Address" on page 3-9.

TEMPORARILY CONNECT THE RECEIVER TO TV

You must connect the receiver to your TV to get the information to aim your satellite antenna. At this time, it is not necessary to fully wire your receiver to all your electronic equipment.

See "Wiring Setups" in your User Manual for suggested wiring configurations.

DISCUSSION OF POTENTIAL MOUNTING SITES

When you are surveying your property for appropriate sites for the satellite antenna, keep in mind that you can mount the satellite antenna on a variety of surfaces: brick, cinder block, wood, some sidings, rooftop, or a pole.

Because installing the satellite antenna may involve drilling into the wall or roof of your building, or digging a hole and using cement, you should be confident of the location *before* beginning installation. Errors can be expensive and time-consuming.

The following guidelines apply to all mounting surfaces and locations.

WEATHER AND WIND CONSIDERATIONS

The satellite antenna has been built to withstand most kinds of weather. However, extremely strong winds could damage the base on which the satellite antenna is mounted. A strong wind can cause the satellite antenna to exert several hundred kilograms of pressure on the mounting surface, so the surface must be stable and strong. Such a mounting surface also helps ensure against movement of the satellite antenna, which would interfere with signal reception. In general, the stronger the signal you maintain, the better your chance of uninterrupted reception during periods of snow, rain, and heavy cloud cover.

SOME KEY POINTS TO CONSIDER

DO'S

You should *always* follow these instructions to help ensure against injury to yourself and damage to your equipment or building. See "Safety Instructions" on page I-i for further safety instructions.

- Assemble the satellite antenna in a safe location before climbing up to the mounting location. Use caution when climbing, and when working at the mounting location. Depending on the mounting location and size of your dish, 2 people may be required to install the mount and antenna to your dwelling.

- Install the satellite antenna only on a solid surface such as cinderblock, brick, or solid foundation material. If you install it on the side of a building, be sure to attach the bolts directly to a building stud or other solid material. Use the appropriate drilling and attachment hardware for the surface.

- Make sure you have determined the best location for the satellite antenna before drilling the holes in your building or setting up the mounting pole. Mistakes can be costly.

- All installations should conform to your local building and electrical codes. If you are not sure, contact a licensed building inspector or electrician in your area to assist you. Be aware that community covenants, if any, may have additional requirements.

- If possible choose a site that is accessible in most weather conditions. You may need to clean snow, ice or debris off the satellite antenna.

- Place the satellite antenna as close to the receiver as possible. We recommend using no more than 30 meters of RG-6 (coaxial) cable between the receiver and the satellite antenna, unless you install a line amplifier to boost the signal.

- Consider seasonal changes. The site may appear unobstructed in the winter, but spring and summer foliage could block the signal to the satellite antenna.

DO NOTS

- Never install the satellite antenna under power lines.

- Do not install the satellite antenna where it can be jostled, bumped, or blocked by people, animals, or vehicles.

- Do not install the satellite antenna where it is exposed to high winds.

- Do not try to install the satellite antenna in windy or stormy weather, particularly if there is a chance of lightning.

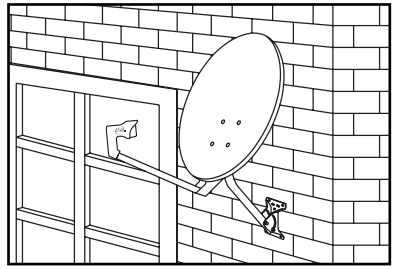
- Do not attempt to fasten the satellite antenna to the mortar between bricks or cinder blocks.

- Do not mount the satellite antenna on vinyl or aluminum siding. These materials are structurally too weak to securely hold the satellite antenna, even with a building stud underneath.

- Do not install the satellite antenna on stucco or imitation masonry unless the base material is solid. Do not mount the satellite antenna on composite materials such as strand, chip, fiber, or particle board unless the fastener attaches securely to a wall stud, rafter, or other foundation material beneath the surface.

- Do not mount the satellite antenna in a tree.

MOUNTING THE ANTENNA ON BRICK



We define "brick" as a solid brick wall or other structure. This does not include brick facing that is used on some buildings over the main structure. If you are mounting the satellite antenna on brick facing, see "Mounting the Antenna on Siding," below.

You can mount the satellite antenna on a solid brick wall.

- The brick surface must be flat and even.
- The mortar between the bricks should be in good to excellent condition. The satellite antenna foot should be mounted on several bricks. As the wind tugs on the satellite antenna, the foot will put heavy pressure (several hundred kilograms) on those bricks in different directions. Loose or weakened mortar may allow the bricks to shift, changing the dish angle and reception quality, and possibly damaging the satellite antenna and the building. The installed satellite antenna could also hasten the deterioration of old mortar.
- To mount the satellite antenna on brick, be sure that all of the fasteners are set into the brick, not into the mortar between the bricks. Use materials necessary to follow the local building codes.

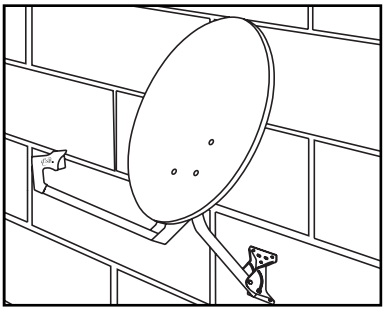
MOUNTING THE ANTENNA ON SIDING

We do *not* recommend mounting the satellite antenna on aluminum or vinyl siding. These materials can be structurally unsound, causing eventual shifting of the dish. To mount the satellite antenna on solid siding, be sure to follow the suggestions below.

- The surface must be flat and even. You may need to use a separator, or shim, between the shingles to even the siding surface.
- Mount the foot on the foundation material beneath the siding surface. This may be a building stud, cinder block, or other solid material. To locate the studs, find the vertical line of nails where the siding is attached to the building, or use a stud finder.

MOUNTING THE ANTENNA ON CINDER BLOCK

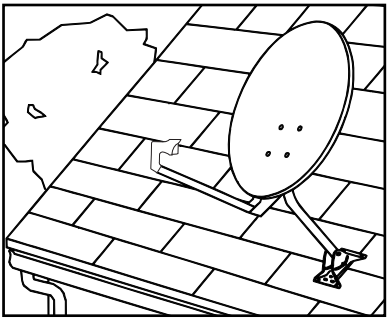
You can mount the satellite antenna on cinder blocks, whether they are part of a wall or the side of a building.



- The surface must be flat and even.
- Be sure that the cinder block and mortar are in good condition.
- We recommend using toggle anchors and machine bolts, inserted into the hollow of the block, as fasteners. Other types of anchors may not have the required strength.

MOUNTING THE ANTENNA ON THE ROOF

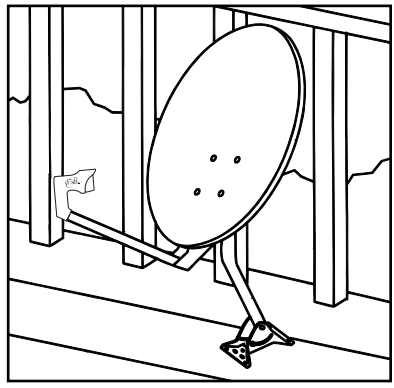
You can mount the satellite antenna on the roof. This usually provides the highest available location.



- Attach the satellite antenna to a rafter beneath the roof surface. You can locate the rafter by looking for the nails attaching the fascia board to the rafters. You can also locate the rafters from inside the attic.
- To prevent the roof from leaking, you should caulk the holes, or use silicone sealant around the holes and at the bottom of the satellite antenna foot where it contacts the surface. Apply the sealant before you bolt the foot down tight.

MOUNTING THE ANTENNA ON WOOD

You can mount the satellite antenna on a wooden deck, wooden beam, or other wooden surface.



- The surface must be flat and even.
- Be sure that the wood has a solid foundation, and is secured. It should be a strong piece that cannot be moved or jiggled.
- Do not mount the satellite antenna on a railing.

INSTALL THE SATELLITE ANTENNA

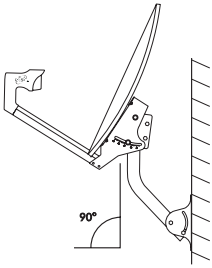
Once you have found the direction and elevation of the satellite and decided on the best mounting location, you can install the satellite antenna.

ORIENTATION OF MAST OR POLE

It is very important that the upper part of the mast or the mounting pole, whichever is used, be truly plumb (vertical). If not, the elevation provided by the receiver for your location will be inaccurate. This will make it more difficult for you to find the satellite.

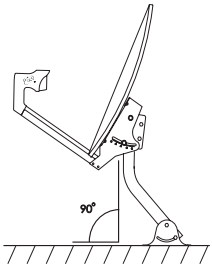
Refer to page I-4, "*Summary of Installation*" to begin the installation of your antenna.

Vertical Mounting Surfaces with Mast



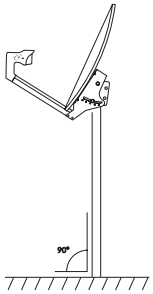
The figure above shows how you should attach the mast to the foot for mounting on vertical surfaces.

Horizontal Mounting Surfaces with Mast



The figure above shows how you should attach the mast to the foot for mounting on horizontal surfaces.

Pole Mounting Surfaces



The figure above shows how you should attach the dish support and bracket to a mounting pole.

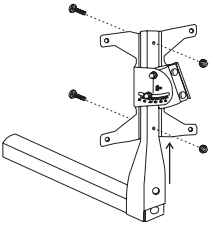
Install the Antenna Mount

ATTENTION!

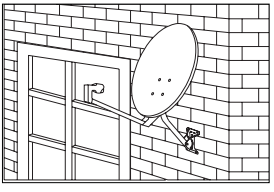
Before you install the antenna mount, you should make sure that you can route the cable from the mounting location into your building, drilling holes where necessary, to the receiver.

ATTENTION!

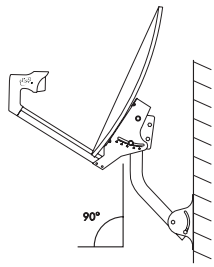
Assemble the satellite antenna in a safe location before climbing up to the mounting location. Use caution when climbing, and when working at the mounting location.



1. Gather all the items you will need for the assembly.
2. If the dish support arm and the bracket that holds it came separately, attach the arm to the bracket with the supplied bolts.
3. Mount the foot on the solid surface you have chosen.
4. Adjust the mast so that when the foot is mounted, the upper part of the mast is, as close to vertical as possible. Use a plumb line or bubble level to measure the upper part of the mast. Alignment of the dish is more difficult if the mast is not plumb.



You may have either one or two LNBF cables to attach, depending on which type of LNBF you purchased and how many receivers are being installed.



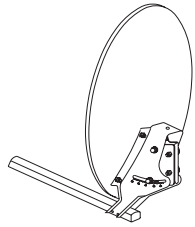
Note: If you have to attach two cables to the LNBF, the following instructions apply to both cables. Use only RG-6 coaxial cables with "F" connectors. Do not use the 1.8-meter RF or VHF cable supplied with the receiver. This cable is used for the receiver to TV connection.

5. Place the dish on the support arm. Align the flathead bolts with the dish support bolt holes on the dish supports.

6. Insert each flathead bolt into one of the holes, and secure it by threading a lock nut onto the bolt on the back side. Do this for all the flathead bolts.

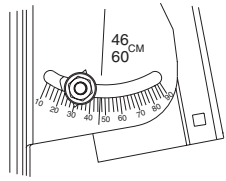
7. Tighten the bolts so that they are snug.

   This is a picture of the support arm and bracket with the dish attached.

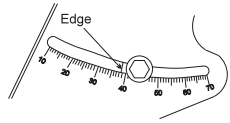


8. Tilt the support bracket to the approximate elevation of the satellite. Use the elevation you found earlier on the Satellite Location Reference Chart.

   If you have the bracket with points above the elevation washer, align the elevation marks on the bracket with the points on the washer.

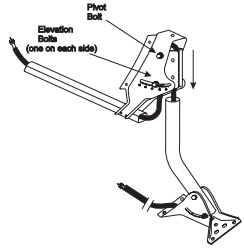


   If you have the bracket where the edge of the mast shows through the curved slot, align the edge with the desired elevation mark.



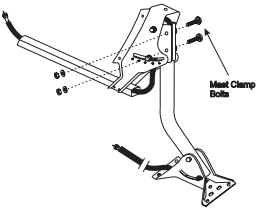
9. Slide the mast clamp onto the mast.

   Tighten the elevation bolts and the pivot bolt so that the bracket is snug, but can still be moved up and down.



10. Turn the antenna mount on the mast or pole to align the LNBF support arm in the direction of the satellite. Use the direction you found earlier in the Satellite Location Reference Chart.

Tighten the mast clamp bolts so that the clamp is snug, but can still be moved back and forth.



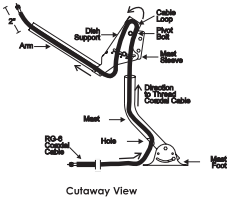
11. Thread the LNBF cable into the cable hole near the mast foot, up the mast and out the top of the mast.

    Do not kink or pinch the cable.

12. Take the end of the cable coming out the top of the mast, and thread it up the mast sleeve of the support arm.

13. Loop the end of the cable over the pivot bolt.

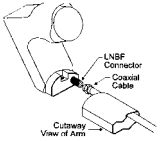
14. Bring the cable back down on the outside of the mast sleeve, between the dish supports.

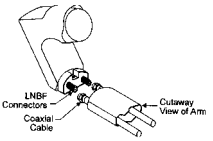


Cutaway View

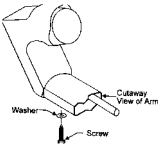
15. Thread the cable through the arm and out the end of the arm.

16. Slip the weather boot(s) onto the LNBF cable(s). To do this, insert the end of the cable with the screw connector into the smaller end of the boot and work it through. When you are finished the boot should slide freely over the cable but hold snugly when slipped up over the screw connector. Be patient. This is a difficult and somewhat painstaking job. (If possible, place weather boot on cable before putting on "F" connector).





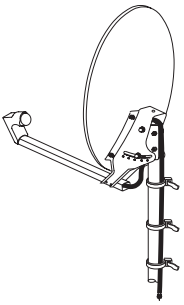
17. Attach the LNBF to the LNBF cable(s). Slide the weather boot up securely to cover the cable/LNBF connection at the base of the LNBF.



18. Fit the LNBF onto the end of the dish support arm, sliding it until it is inserted firmly. Attach LNBF to the support arm using the LNBF screw and washer.

INSTALLING A METAL POLE MOUNT

You can mount the satellite antenna on a metal pole if necessary. This allows you a wider range of locations for installation.



Note: If used, the metal pole should have an outside diameter of approximately 1 5/8 inches (approx. 4 cm), and should be sturdy enough not to flex in high winds. If the clamp ends up being slightly loose, use weather proof sandpaper or emery cloth to shim the clamp, and tighten.

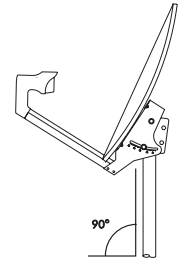
- You can mount the satellite antenna on a metal pole that is attached to an existing building. Using this method, you can raise the satellite antenna to gain a line-of-sight view of the satellite if you cannot find a better location. Be sure to follow all safety requirements, and properly ground the satellite antenna and pole.

- You can also mount the satellite antenna on a metal pole installed in the ground, as long as the soil provides a firm foundation and the pole does not allow the antenna to move during windy weather.

Be sure to locate and avoid underground sewer, gas, water, and telephone lines before digging. Your local utility companies can tell you where these are located.

Before you attach the pole to its mounting surface or install the pole in the ground, you should make sure that you can route the cable from the mounting location into the building, drilling holes where necessary, to the receiver. If the pole is installed in the ground, be sure that you can route the cable overhead or underground in a conduit or with a direct burial cable.

1. The most common method to install the pole in the ground is to use cement to secure it in a hole. Be sure that the pole remains at 90˚ from horizontal as the cement dries. You may want to use guy wires or braces to keep the pole steady. The bottom of the hole should be 15 centimeters below the frost line in areas where temperatures fall below freezing. In most areas of Canada, a 1-meter-deep hole for the pole should be sufficient.



2. A way of ensuring that the pole does not rotate in the dried cement is to cut the bottom of the pole at an angle, and to place a brick or flat rock in the bottom of the hole to support the pole before pouring in the cement.

3. Use a plumb line to ensure that the pole is at 90˚ from horizontal. Take at least two measurements on different sides of the pole periodically while the cement is drying. Having the pole plumb allows you to accurately aim the antenna. If the pole is slightly off plumb, you can still aim the antenna for good reception, but it is very difficult.

4. Typically, the cable is routed down outside the pole. However, if you want to feed the LNBF cable up through the pole in the same manner as you would through the mast, you will need to drill a hole in the pole big enough to do this. The hole should be above ground after the pole has been set in the cement.
   You will not need the metal foot and mast assembly provided with the antenna for this installation, but we recommend you keep the assembly in case you wish to relocate the antenna later.

5. Follow the instructions for mounting the satellite antenna mast, but use the metal pole in place of the mast and foot.

6. Bring the LNBF cable down the outside of the pole. Be sure to secure the cable firmly, but not too tightly, to the pole using tie-downs.

STEP 2: FIND THE RIGHT LOCATION FOR THE DISH

The Dish must be at a location on your dwelling which gives a clear, year-round, unobstructed "view" of the satellite and which is also free from occasional blockages due to vehicles or passers-by.

Locating the appropriate site for your Bell ExpressVu dish is a two step process: First, use your compass and the satellite direction data provided in this guide, to estimate the general direction of the satellite. Use this information to find the right spot to mount the dish on your dwelling. Next, get more serious about the installation; confirm that your dish has a clear unobstructed "view" of the satellite and that the dish can be mounted securely.

WHAT YOU WILL NEED

- Compass
- Level
- Satellite Receiver connected to a television
- Satellite Location Table (page I-50)
- Vertical Elevation Protractor (page I-53)

DETERMINE DIRECTION TO THE SATELLITE

You must determine the direction the Bell ExpressVu satellite from your location to help you determine where to mount your antenna. You must have a clear line of sight from the antenna location to the satellite. Use the following procedure to find the best location for the antenna, while keeping in mind the considerations referenced in **DISCUSSION OF POTENTIAL SITES** on page I-9.

After you finish mounting the antenna, you will need to re-aim the dish to get the strongest signal. Please see **STEP 5: ALIGNING THE DISH** on page I-44 for this procedure.

WHERE IS IT?

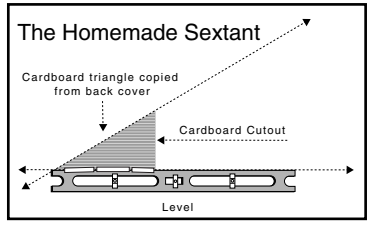
The Bell ExpressVu satellite orbits the Earth over the equator. For everyone in Canada, this means that the satellite will be south of your location.
The Bell ExpressVu satellite is approximately 35,680 kilometers above the surface of the Earth. It is in what is called a "geosynchronous orbit." This means that the satellite stays aligned over one place on the surface of the Earth. If you could see the satellite, it would seem to hang in one spot in the sky.
Because the satellite does not move in relation to the surface of the Earth, it is easy to maintain the signal. Once your antenna is aimed at the Bell ExpressVu satellite, the antenna will not have to move to follow the satellite.

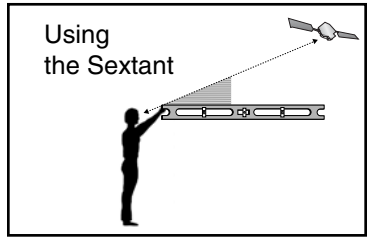
When determining the approximate location of the satellite, you will need to find the azimuth (South, Southeast, or Southwest direction to the satellite) and elevation (angle up to the satellite) from your location. "Azimuth" is also called "direction." (As shown on a compass). We use the term "direction" in this guide.

Refer to "Satellite Location Reference Chart" on page I-50. Find your city or a city near you and note down the appropriate settings for direction and elevation.

FIND A CLEAR LINE OF SIGHT

"Find a clear line of sight" means to find a location for the satellite antenna so that its view of the orbiting satellite is unobstructed by trees, buildings, or any other obstructions. This includes making sure that sapling trees are not likely to grow up or out into the line of sight. Also, consider seasonal changes. An unobstructed site in winter may be obstructed by foliage in spring and summer.





If you need a way to determine if you have a clear “view” to the satellite, try this procedure: Cut out a cardboard triangle with its base about 8-10 inches long. Make the angle of the triangle equal to the vertical elevation angle for your location as given in the Table (page I-50) or simply use the triangle as illustrated on page I-53 as a template. Tape it to your level as shown in the sketch. Now you have a homemade sextant! Next, look up the edge of the cardboard while holding the level horizontal while aiming it at the correct compass heading. If there is an obstruction, locate the dish elsewhere.

1. Take a compass and the direction and elevation numbers to your planned location for the satellite antenna.

(VERY IMPORTANT)

Make sure the compass is well away from metal objects, and that there are no magnetic or electronic devices nearby. Holding the compass so the needle can swing freely, turn the compass until the dark end of the compass needle is aligned on the N. This points to magnetic North. The compass face is divided into 360 degrees, North is zero degrees (0˚), East is 90˚, South is 180˚, and West is 270˚.

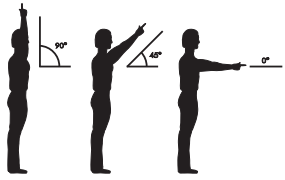
Finding the ExpressVu Satellite from Calgary

ExpressVu Satellite 133˚

2. On the compass, find the direction number provided by the Satellite Location Reference Chart. Turn to face this number, while keeping the dark end of the needle over the N. This is the direction of the satellite. Find a landmark, or lay a stick or board on the ground lined up in that direction.

3. Use the elevation number from the chart to find out how high the satellite is in the sky from your location. You know that vertical is 90˚, and horizontal 0˚, and halfway in between is 45˚.

   Stand close to where you plan to mount the satellite antenna and face in the direction that you marked for the direction to the satellite. Using the elevation angle, find the closest approximation to that angle in the sky. You now are pointing to the approximate location of the satellite.



4. Note whether there are any obstructions between you and the satellite. Leave a margin for adjustment, because you have not yet aimed the antenna exactly.

   If there are obstructions, you will have to find a new location, or remove the obstruction, if possible.

5. If necessary, repeat steps 1 through 4 until you have located the best location for the antenna. The best location should provide a sturdy support for the antenna, plus it must have a clear line of sight. Mark the spot and the direction to the satellite.

MULTI-SATELLITE ANTENNA INSTALLATION

The procedures in this guide are specifically for the Bell ExpressVu's Multi-Satellite Antenna installation. For more detailed information, you may need to refer to your satellite system's Installation Instructions/User Manual

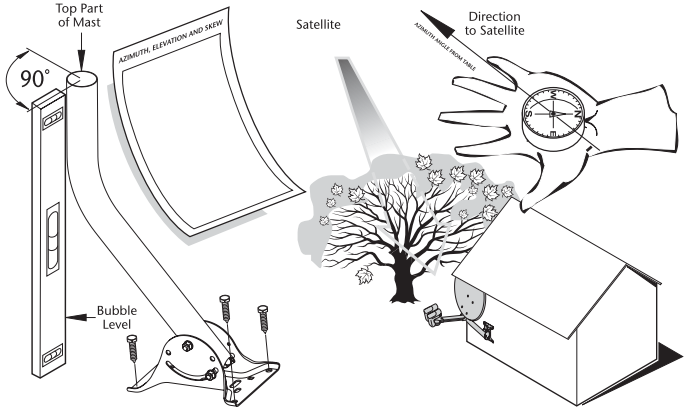
1. Before you start, read all safety precautions in your satellite system's Installation Instructions/User Manual.

2. Use the Satellite Location "Look" Angles Chart located at the back of this manual for specific coordinates to point the satellite dish in your area. The azimuth, elevation and skew define the exact direction to aim your dish so that it can receive signals from the satellite. Azimuth is the compass direction; elevation is the "up-down" angle; and skew is the 'side-to-side' rotation angle of the satellite dish.

3. Using the azimuth and elevation angles from Step 2, find a location for the satellite dish. With a compass, find the required azimuth angle. Then, use the elevation angle to find out how high the satellites are in the sky from your location. Make sure nothing blocks the line of sight to the satellites. For more detailed instructions on how to find the satellites, refer to your satellite system's Installation Instructions/User Manual.

4. Mount the mast to a solid surface so that the dish antenna cannot move or be bumped out of adjustment. Keep in mind that physical and environmental conditions can affect your satellite dish's ability to receive a clear satellite signal. The conditions to be aware of are: eaves and overhangs on your building or house, wind, plant growth, and deterioration of the mounting surface. Never mount to a tree.

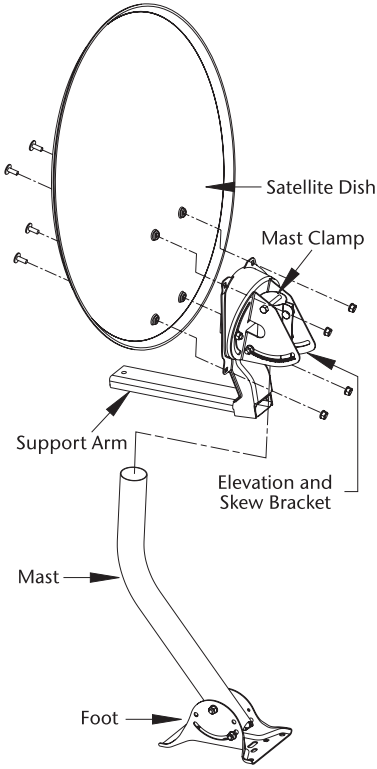
5. Align the top part of the mast so that it is absolutely vertical. If the top part of the mast is off vertical by only a few degrees, it will be difficult or impossible for you to find the satellites. Take at least two readings with a bubble level, on sides of the mast that are 90 degrees apart from one another (see diagram).

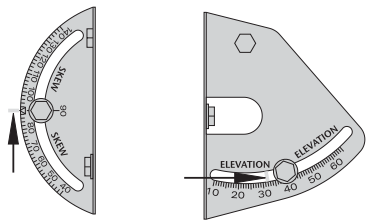


6. Assemble the satellite dish, following the diagram. Your satellite system's Installation Instructions/User Manual contains detailed assembly instructions.

7. Loosen both skew bolts and set the skew by rotating the dish mounting bracket to align the red mark with the required angle on the skew scale. Tighten the skew bolts securely to keep the dish from rotating. Once the skew is set, do not try to fine-tune this angle when aiming the dish.

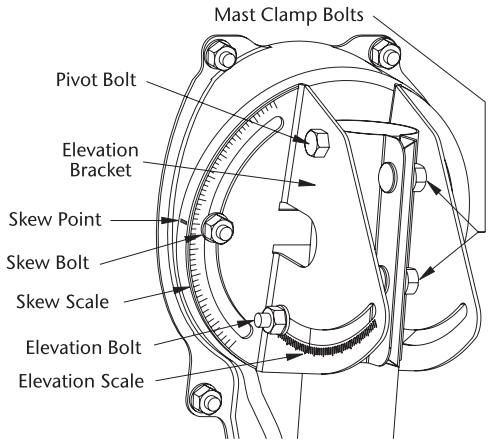
8. Set the elevation by tilting the dish mounting bracket to align the red edge with the required angle on the elevation scale. Tighten the elevation bolts, but do not tighten the pivot bolt at this time.





Line up the red notch with the correct angle on the skew scale.

Line up the red edge of the mast with the correct angle on the elevation scale.



9. Note the Y-bracket is labeled ‘82°’ on one side and ‘91°’ on the other. Only use the RG-6 coaxial cable for all connections between the LNBFs and receiver. Label one coaxial cable '91' on both ends and the other coaxial cable '82' on both ends. If you are installing two receivers,repeat this step for the additional two cables. You will then have two cables labeled ’91’ and two labeled ’82’. This will help reduce confusion later.

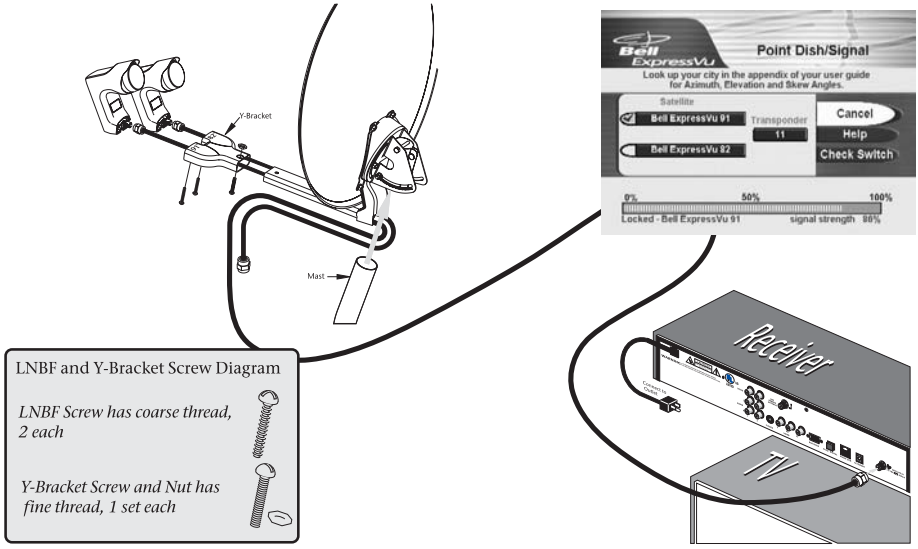
10. Thread the labeled coaxial cables through the support arm and the Y-bracket. Make sure the cable(s)labeled ’91’ are threaded through the ’91’ side and the ’82’ cable(s) are threaded through the ’82’ side as shown. Attach to Y-bracket using the Y-bracket screw. Connect the cable(s) to each LNBF. Attach one LNBF to the Y-bracket in slot labeled '91' using the two LNBF screws. Repeat for '82' LNBF.

11. Slide the dish assembly down onto the mast. Make sure the pivot bolt rests on top of the mast. Turn the dish assembly so that it points in the general direction of the satellite using the azimuth angle from step two.

12. Ground the coaxial cable(s) by following the wiring diagram outlined in your satellite system’s Installation Instructions/User Manual. Ensure that the grounding conforms with your area’s local electrical code.

13. Connect the coaxial cable from the '91' LNBF directly to the satellite receiver. You may use a female-to-female connectore to do this (optional). Connect the receiver to the television using the composite (RCA-type) video and audio outputs.

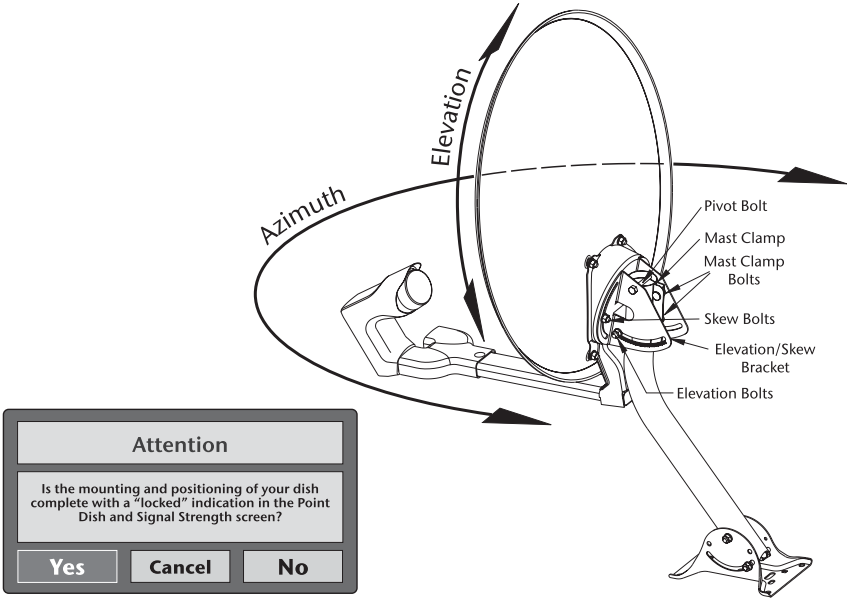
14. Turn ON the televisionand receiver. Adjust video input setting on television until the 'Point Dish and Signal Strength' menu is displayed.



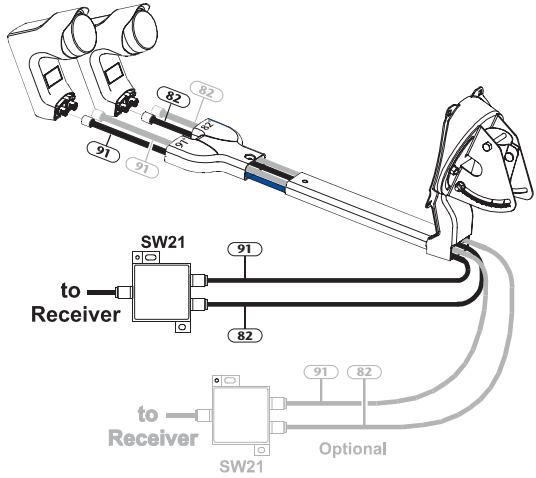
15. Turn the dish assembly back and forth very slowly, until the signal strength bar turns green to indicate the signal. Ensure that your body is not blocking the path between the dish and the satellite! Note: If you cannot find the signal, turn the dish assembly back to the original azimuth setting. Loosen the elevation bolts and increase the elevation angle by two degrees. Tighten the elevation bolts and try turning the dish assembly slowly back and forth. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

16. Once you have the signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the maximum possible signal strength. Tighten the mast clamp blots. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a maximum signal. Do not adjust the skew setting! Tighten all the bolts in the dish assembly so that the dish cannot be moved.

17. Once you have the strongest possible signal, press the Cancel button on the remote control to exit the 'Point Dish and Signal Strength' menu. The receiver will then display an 'Attention' message on the television screen asking whether the installation is complete. Use the remote control arrow buttons to highlight the Yes option, and press the Select button. The receiver will automatically 'download' the latest operating software. Once complete, the receiver will display a 'Warning' message stating that you are tuned to a channel that has not been subscribed to.

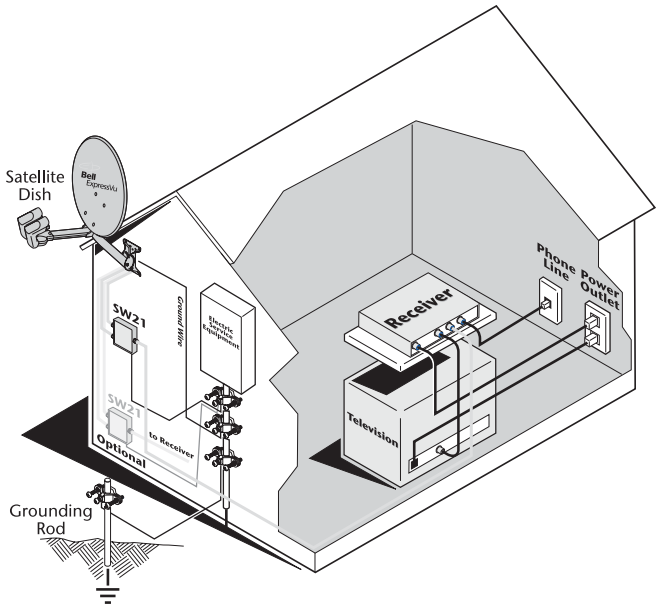


18. Connect the cables labeled '82' leading from the satellite dish to each 'Dish 1' input on both SW21 multi-dish switches. Next, connect the cables labeled '91' leading from the satellite dish to each 'Dish 2' input on both SW21 multi-dish switches Finally, take cable from the other side of the multi-dish switch and connect directly to each Bell Express Vu satellite receiver. If you possess only one satellite receiver, use either multi-dish switch output to connect the cable in order to relay the satellite signal. Whichever multi-dish switch that is left un-used will be available in case you wish to connect a second satellite receiver in future.



19. Complete installation and wiring by following the instructions in this manual.

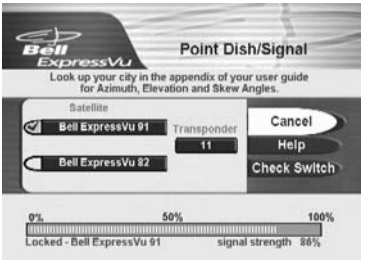
20. After the wiring is done, complete the satellite system installation by following the 'System Set-up' instructions outlined on page I-26.



SYSTEM SET-UP

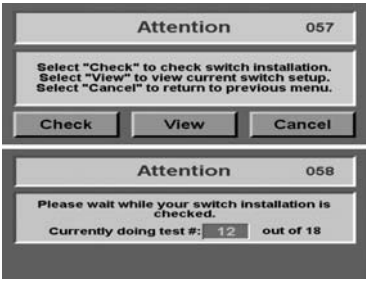
COMPLETING INSTALLATION WITH MULTI-SATELLITE 'POINT DISH' ONSCREEN MENUS:

1. Once the satellite system installation is finished, power on the satellite receiver and display the 'Point Dish' screen on the TV. Note that the display has now changed to show satellite reception from both satellite locations: Bell ExpressVu 91˚ and Bell ExpressVu 82˚. (If the 'Point Dish' screen has not changed, power off the satellite receiver so it can begin to download the new Multi-Satellite software. Ensure the receiver is set to accept upgrades via the 'System Setup' menu.)

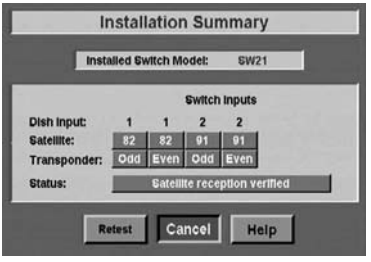


2. Using the remote, confirm signal strength by selecting one satellite and then the other.

3. Next, perform a test on the satellite system switches by selecting 'Check Switch' option on the screen. On the following display, select 'Check' to begin the automatic set-up for systems installation.



4. Once the test is completed, an 'Installation Summary' screen will appear and indicate the various settings for each switch output and also verify proper satellite reception.



Congratulations! The installation for your new Bell ExpressVu Multi-Satellite system is now complete! Simply call 1 888 SKY DISH (759-3474) to activate your satellite receiver(s) and begin enjoying Bell ExpressVu's 100% digital quality television.

www.bell.ca/satellite
1-888-SKY-DISH

STEP 3: ASSEMBLING THE DISH

The following section outlines the assembly procedure for all four dish sizes: 51 cm, 60 cm, 90 cm, and 120 cm.

The overall assembly procedure is similar for all sizes, but there are some specific differences which are addressed in four separate sections. Please refer to the section which is relevant to the dish size you have purchased:

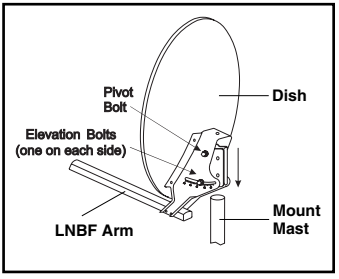
- Step 3.1 Assembling the 51 cm Dish
- Step 3.2 Assembling the 60 cm Dish
- Step 3.3 Assembling the 90 cm Dish
- Step 3.4 Assembling the 120 cm Dish

STEP 3.1: ASSEMBLING THE 51 CM DISH

STEP 3.1A: PRE-ASSEMBLE THE PARTS (51 CM DISH)

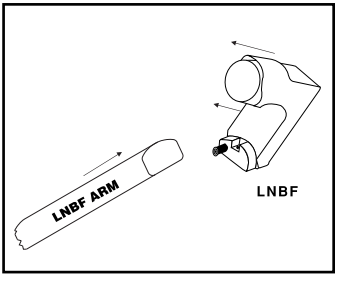
It's best to pre-assemble the dish indoors, so that it is all ready to place on the mast outdoors, quickly and easily ... especially if it's cold out.

The complete system consists of three main parts: the dish mount, the dish assembly, and the receiver. The mount consists of the foot (base plate) and a bent pipe called the mast. These two parts are pre-assembled. The dish assembly consists of the antenna, or dish, the dish support bracket, the (LNBF) low noise amplifier, and the LNBF support arm. The receiver is also fully assembled.

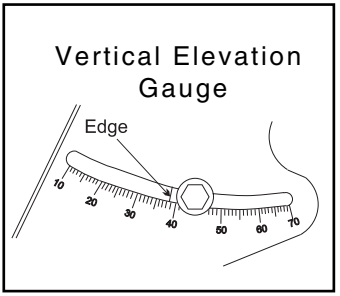


Pre-assemble the Dish as follows:

1. Bolt the dish to the support bracket and the support arm; there are clear instructions and pictures in the antenna box.



2. Determine your specific vertical elevation from the Table (page I-50) and adjust the angular tilt of the antenna so that the edge of the red mark on the gauge is set to your vertical elevation. In our diagram here, it is set for 38.5 degrees.
3. Lightly tighten the bolt on the gauge side of the angular pivot; leave the bolt on the back side slightly loose.
4. Your antenna assembly is now ready to be placed on the outdoor mount assembly.



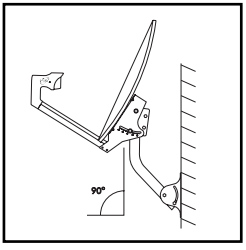
ATTENTION!

The mount for attaching the dish to the dwelling is made of steel and, as a result, it is very magnetic. If you are too close, it can adversely alter your compass readings.

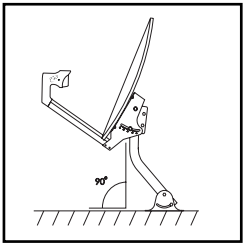
STEP 3.1B: ATTACHING THE MOUNT TO YOUR DWELLING (51 CM DISH)

The mount should be attached to your dwelling before putting the dish assembly on it. When fastening it to your wall or roof, etc., make sure that the top portion is "plumb"; you can get it right by using a spirit level on both the front and side of the top piece. It is important to affix the mount firmly to your structure with at least 4 fasteners so that the wind will not alter the direction of the dish.

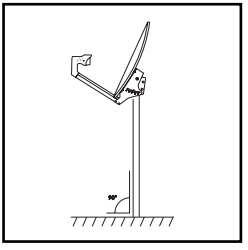
Note: Plumb means vertical in all directions. A flagpole is plumb.



WALL MOUNT



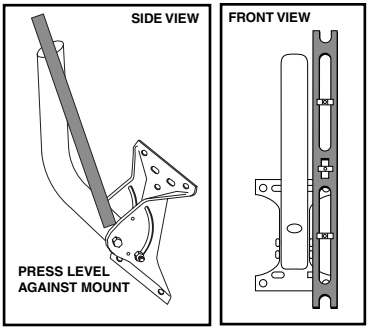
HORIZONTAL MOUNT



ROOF MOUNT

Here is how it can be done:

1. Place the mount foot on the surface location where you intend to attach it to the structure.
2. Arrange the holes in the foot to be over solid material and adjust the top part of the mast to be approximately plumb.
3. Put your spirit level on the side of the pipe (see diagram) and move the foot slightly to make the pipe vertical. Don't worry about getting the pipe level in the front and back direction - this will be done with the pivot arrangements after the foot is mounted.



4. Mark the location of one of the holes and remove the mount.
5. Drill the hole and attach the mount foot with the one fastener only.
6. Now, once again, position the top of the mast to be approximately plumb; then place a level on the side of the pipe and pivot the mount foot slightly around the one attachment and adjust the mount foot to make the pipe vertical. Once achieved, drill the other 3 holes while the mount foot is still properly in place. (Alternatively, you can mark the holes, remove the mount, then drill).
7. Attach the mount with the 4 fasteners; seal the holes with silicone to prevent water damage to your dwelling.
8. Place your level on the front face of the top section of the mast and adjust the pipe to be vertically level by pivoting around the base bracket. Tighten down the nuts on the bracket when it is level. There are no further adjustments to make on the mount.
9. Check your work... The top of the mast should now be "plumb"!

If you have trouble fastening the mount to a surface, try mounting a solid piece of wood to your dwelling's surface first, then fastening the mount to the wood.

STEP 3.1C: INSTALLING THE DISH ON THE MOUNT (51 CM DISH)

You have installed the mount on your dwelling and you have pre-assembled the antenna unit, ready to be installed on the mount.

There are just a few steps here:

1. Slide the antenna assembly over the mast.
2. Lightly tighten the two nuts on the back of the mast clamp, so that the antenna can pivot in the East/West directions but not be loose.
3. You are ready to carry out the antenna alignments, as soon as the wiring in Step 3.1D is completed.

STEP 3.1D: CONNECTING THINGS TOGETHER (51 CM DISH)

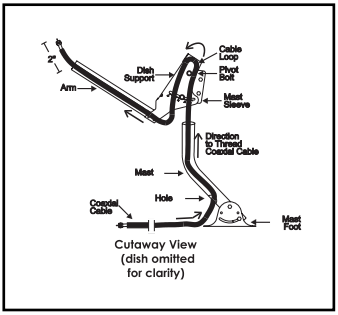
The wiring is accomplished as follows:

1. Thread a length of coaxial cable through the dish as shown in diagram
2. Slip the weather boot(s) onto the LNBF cable(s). To do this, insert the end of the cable with the screw connector into the smaller end of the boot and work it through. When you are finished the boot should slide freely over the cable but hold snugly when slipped up over the the screw connector. Be patient. This is a difficult and somewhat painstaking job. **(If possible, place weather boot on cable before putting on "F" connector)**.

3. **Attach the LNBF to the LNBF cable(s). Slide the weather boot up securely to cover the cable/LNBF connection at the base of the LNBF.**

4. Slip the LNBF onto the end of the arm, until contact is made with the LNBF bracket stops **and put in screw through arm and LNBF.**

5. Route and fasten the cable in a neat, unobtrusive manner in such a way so it cannot be damaged by accident. Connect the opposite end of the cable to your receiver, to the connector marked "Satellite In".



6. See page I-42 for instructions concerning safety grounding.

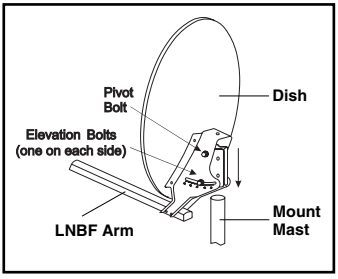
The assembly and mounting of the 51 cm Dish is complete. Proceed to page I-41 Installing the Receiver.

STEP 3.2: ASSEMBLING THE 60 CM DISH

STEP 3.2A: PRE-ASSEMBLE THE PARTS (60 CM DISH)

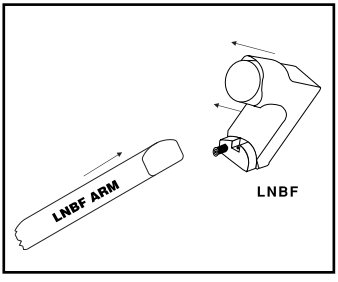
It's best to pre-assemble the dish indoors, so that it is all ready to place on the mast outdoors, quickly and easily ... especially if it's cold out.

The complete system consists of three main parts: the dish mount, the dish assembly, and the receiver. The mount consists of the foot (base plate) and a bent pipe called the mast. These two parts are pre-assembled. The dish assembly consists of the antenna, or dish, the dish support bracket, the (LNBF) low noise amplifier, and the LNBF support arm. The receiver is also fully assembled.

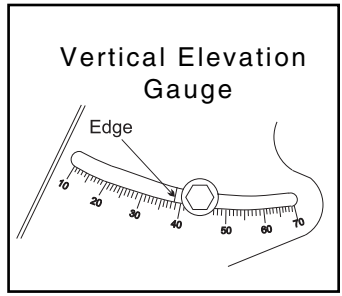


Pre-assemble the Dish as follows:

1. Bolt the dish to the support bracket and the support arm; there are clear instructions and pictures in the antenna box.



2. Determine your specific vertical elevation from the Table (page I-50) and adjust the angular tilt of the antenna so that the edge of the red mark on the gauge is set to your vertical elevation. In our diagram here, it is set for 38.5 degrees.
3. Lightly tighten the bolt on the gauge side of the angular pivot; leave the bolt on the back side slightly loose.
4. Your antenna assembly is now ready to be placed on the outdoor mount assembly.

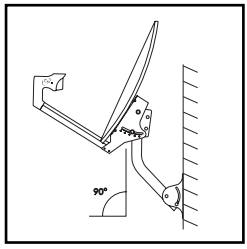


The mount for attaching the dish to the dwelling is made of steel and, as a result, it is very magnetic. If you are too close, it can adversely alter your compass readings.

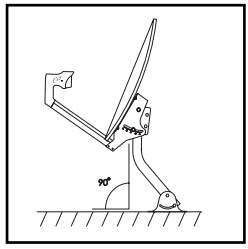
STEP 3.2B: ATTACHING THE MOUNT TO YOUR DWELLING (60 CM DISH)

The mount should be attached to your dwelling before putting the dish assembly on it. When fastening it to your wall or roof, etc., make sure that the top portion is "plumb"; you can get it right by using a spirit level on both the front and side of the top piece. It is important to affix the mount firmly to your structure with at least 4 fasteners so that the wind will not alter the direction of the dish.

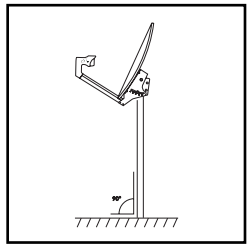
Note: Plumb means vertical in all directions. A flagpole is plumb.



WALL MOUNT



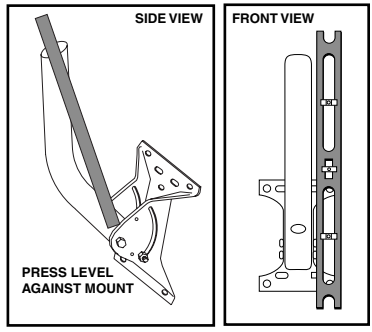
HORIZONTAL MOUNT



ROOF MOUNT

Here is how it can be done:

1. Place the mount foot on the surface location where you intend to attach it to the structure.
2. Arrange the holes in the foot to be over solid material and adjust the top part of the mast to be approximately plumb.
3. Put your spirit level on the side of the pipe (see diagram) and move the foot slightly to make the pipe vertical. Don't worry about getting the pipe level in the front and back direction - this will be done with the pivot arrangements after the foot is mounted.



4. Mark the location of one of the holes and remove the mount.
5. Drill the hole and attach the mount foot with the one fastener only.
6. Now, once again, position the top of the mast to be approximately plumb; then place a level on the side of the pipe and pivot the mount foot slightly around the one attachment and adjust the mount foot to make the pipe vertical. Once achieved, drill the other 3 holes while the mount foot is still properly in place. (Alternatively, you can mark the holes, remove the mount, then drill).
7. Attach the mount with the 4 fasteners; seal the holes with silicone to prevent water damage to your dwelling.
8. Place your level on the front face of the top section of the mast and adjust the pipe to be vertically level by pivoting around the base bracket. Tighten down the nuts on the bracket when it is level. There are no further adjustments to make on the mount.
9. Check your work... The top of the mast should now be "plumb"!

If you have trouble fastening the mount to a surface, try mounting a solid piece of wood to your dwelling's surface first, then fastening the mount to the wood.

STEP 3.2C: INSTALLING THE DISH ON THE MOUNT (60 CM DISH)

You have installed the mount on your dwelling and you have pre-assembled the antenna unit, ready to be installed on the mount.

There are just a few steps here:

1. Slide the antenna assembly over the mast.
2. Lightly tighten the two nuts on the back of the mast clamp, so that the antenna can pivot in the East/West directions but not be loose.
3. You are ready to carry out the antenna alignments, as soon as the wiring in Step 3.2D is completed.

STEP 3.2D: CONNECTING THINGS TOGETHER (60 CM DISH)

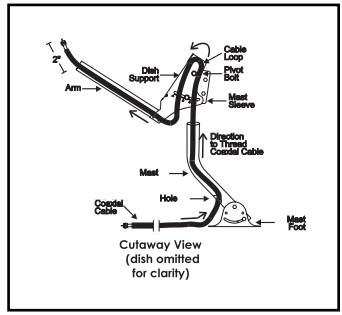
The wiring is accomplished as follows:

1. Thread a length of coaxial cable through the dish as shown in diagram
2. Slip the weather boot(s) onto the LNBF cable(s). To do this, insert the end of the cable with the screw connector into the smaller end of the boot and work it through. When you are finished the boot should slide freely over the cable but hold snugly when slipped up over the the screw connector. Be patient. This is a difficult and somewhat painstaking job. **(If possible, place weather boot on cable before putting on "F" connector)**.

3. **Attach the LNBF to the LNBF cable(s). Slide the weather boot up securely to cover the cable/LNBF connection at the base of the LNBF.**

4. Slip the LNBF onto the end of the arm, until contact is made with the LNBF bracket stops **and put in screw through arm and LNBF.**

5. Route and fasten the cable in a neat, unobtrusive manner in such a way so it cannot be damaged by accident. Connect the opposite end of the cable to your receiver, to the connector marked "Satellite In".



6. See page I-42 for instructions concerning safety grounding.

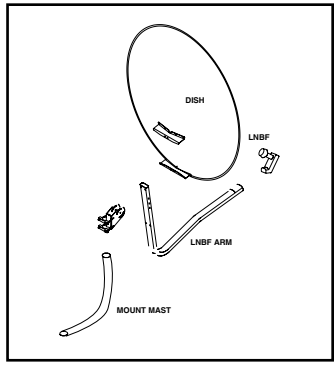
The assembly and mounting of the 60 cm Dish is complete. Proceed to page I-41 Installing the Receiver.

STEP 3.3: ASSEMBLING THE 90 CM DISH

STEP 3.3A: PRE-ASSEMBLE THE PARTS (90 CM DISH)

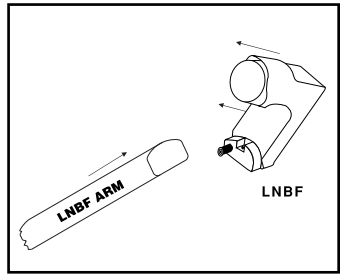
It's best to pre-assemble the dish indoors, so that it is all ready to place on the mast outdoors, quickly and easily ... especially if it's cold out.

The complete system consists of three main parts: the dish mount, the dish assembly, and the receiver. The mount consists of the foot (base plate) and a bent pipe called the mast. The dish assembly consists of the antenna, or dish, the dish support bracket, the (LNBF) low noise amplifier, and the LNBF support arm. The receiver is also fully assembled.

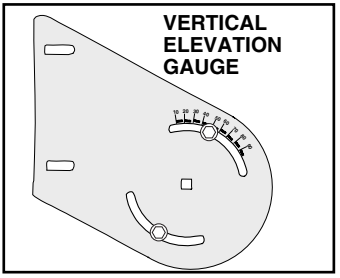


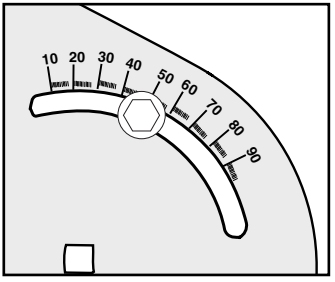
Pre-assemble the Dish as follows:

1. Assemble the dish as indicated in the instructions which are included in the antenna box.



2. Determine your specific vertical elevation from the Table (page I-50) and adjust the angular tilt of the antenna so that the centre of the top bolt on the Mast Head Clamp lines up with your vertical elevation position on the Mast Head elevation gauge. In our diagram here, it is set for 50 degrees.
3. Lightly tighten the two bolts located in the curved slots on the mast head. Leave the pivot bolt slightly loose.
4. Your antenna assembly is now ready to be placed on the outdoor mount assembly.





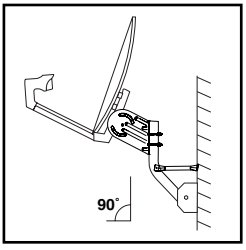
ATTENTION!

The mount for attaching the dish to the dwelling is made of steel and, as a result, it is very magnetic. If you are too close, it can adversely alter your compass readings.

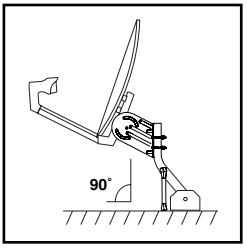
STEP 3.3B: ATTACHING THE MOUNT TO YOUR DWELLING (90 CM DISH)

The mount should be attached to your dwelling before putting the dish assembly on it. When fastening it to your wall or roof, etc., make sure that the top portion is plumb". You can get it right by using a spirit level on both the front and side of the top piece. It is important to affix the mount firmly to your structure with the appropriate fasteners so that the wind can't move it. The dish support mounting assembly requires an area of approximately 9 square feet to accommodate the mast mount foot and the two support struts.

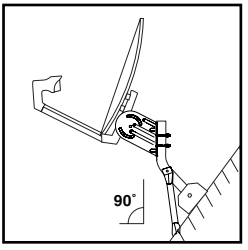
Note: Plumb means vertical in all directions. A flagpole is plumb.



WALL MOUNT

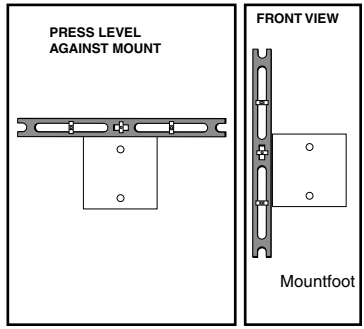


HORIZONTAL MOUNT



ROOF MOUNT

Here is how it can be done:



1. Place the mount foot on the surface location where you intend to attach it to the structure.

2. Mark the location of one of the 2 holes and remove the mount.

3. Drill the hole and attach the mount foot with the one fastener only.

4. Place a spirit level on the top and side of the foot and pivot the foot to make it level and plumb. Drill the other hole while the mount foot is still properly in place. (Alternatively, you can mark the hole, remove the mount, then drill).

5. Attach the mount with the fasteners; seal the holes with silicone to prevent water damage to your dwelling.

6. Install the mast to the mount foot using the supplied fastener. Orientate the mast so that the short curved portion will face vertically.

7. Place a spirit level on the front face of the short curved portion of the mast and adjust the mast to a vertical position. Tighten the mast mounting bolt.

8. Attach the two struts to the mast with the supplied hardware. Tighten the bolt for a snug fit that still allows some slight movement of the struts.

9. Position the foot of each strut squarely on the mounting surface and mark the holes for drilling. Prior to drilling the strut holes, confirm with the spirit level that the mast is still vertical. This is a critical check to ensure proper alignment.

10. Drill the holes while the strut feet are still properly in place. (Alternatively, you can mark the holes, move the struts slightly, then drill.)

11. Attach the mount with the 4 fasteners; seal the holes with silicone to prevent water damage to your dwelling.

12. Tighten the strut attachment bolt which was installed in step 8. Place the level on front face of the short curved portion of the mast to confirm that the mast is still vertical. There are no further adjustments to make to the mount.

If you have trouble fastening the mount to a surface, try mounting a solid piece of wood to your dwelling's surface first, then fastening the mount to the wood.

STEP 3.3C: INSTALLING THE DISH ON THE MOUNT (90 CM DISH)

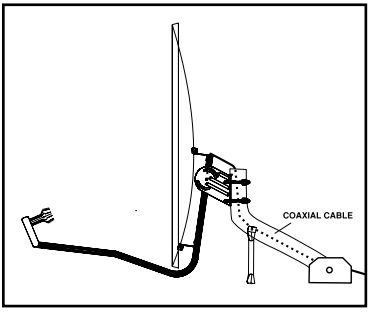
You have installed the mount on your dwelling and you have pre-assembled the antenna unit, ready to be installed on the mount.

There are just a few steps here:

1. Slide the antenna assembly over the mast.
2. Lightly tighten the four nuts on the back of the mast clamp, so that the antenna can pivot in the East/West directions but not be loose.
3. You are ready to carry out the antenna alignments, as soon as the wiring in Step 3.3D is completed.

STEP 3.3D: CONNECTING THINGS TOGETHER (90 CM DISH)

The wiring is accomplished as follows:



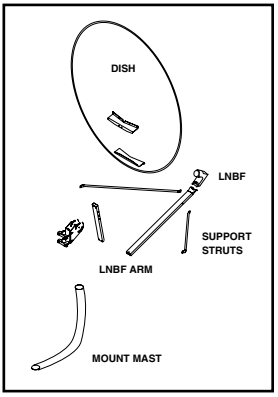
1. Thread a length of coaxial cable through the mast pipe and mast clamp as shown in the diagram.
2. Route the coaxial cable through the side of the feed support tube as shown in the diagram.
3. Slip the weather boot(s) onto the LNBF cable(s). To do this, insert the end of the cable with the screw connector into the smaller end of the boot and work it through. When you are finished the boot should slide freely over the cable but hold snugly when slipped up over the the screw connector. Be patient. This is a difficult and somewhat painstaking job. **(If possible, place weather boot on cable before putting on "F" connector)**.
4. **Attach the LNBF to the LNBF cable(s). Slide the weather boot up securely to cover the cable/LNBF connection at the base of the LNBF.**
5. Slip the LNBF onto the end of the arm as shown, until contact is made with the LNBF bracket stops **and put in screw through arm and LNBF.**
6. Route and fasten the cable in a neat, unobtrusive manner in such a way so it cannot be damaged by accident. Connect the opposite end of the cable to your receiver, to the connector marked "Satellite In".
7. See page I-42 for instructions concerning safety grounding.

The assembly and mounting of the 90 cm Dish is complete.
Proceed to page I-41 Installing the Receiver.

STEP 3.4: ASSEMBLING THE 120 CM DISH

STEP 3.4A: PRE-ASSEMBLE THE PARTS (120 CM DISH)

It's best to pre-assembly the dish indoors, so that it is all ready to place on the mast outdoors, quickly and easily ... especially if it's cold out.

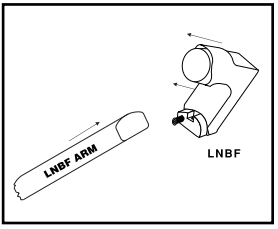


The complete system consists of three main parts: the dish mount, the dish assembly, and the receiver. The mount consists of the foot (base plate) and a bent pipe called the mast. The dish assembly consists of the antenna, or dish, the dish support bracket, the (LNBF) low noise amplifier, and the LNBF support arm. The receiver is also fully assembled.

Pre-assemble the Dish as follows:

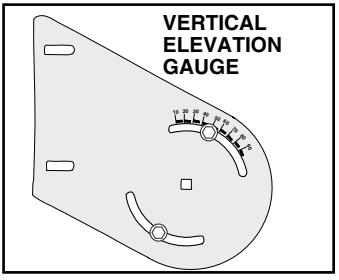
1. Assemble the dish as indicated in the instructions which are included in the antenna box.

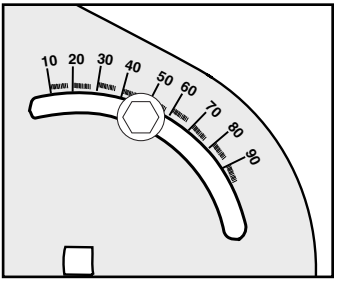
2. Determine your specific vertical elevation from the Table (page I-50) and adjust the angular tilt of the antenna so that the centre of the top bolt on the Mast Head Clamp lines up with your vertical elevation position on the Mast Head elevation gauge. In our diagram here, it is set for 50 degrees.



3. Lightly tighten the two bolts located in the curved slots on the mast head. Leave the pivot bolt slightly loose.

4. Your antenna assembly is now ready to be placed on the outdoor mount assembly.





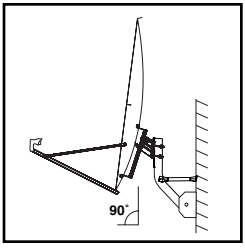
ATTENTION!

The mount for attaching the dish to the dwelling is made of steel and, as a result, it is very magnetic. If you are too close, it can adversely alter your compass readings.

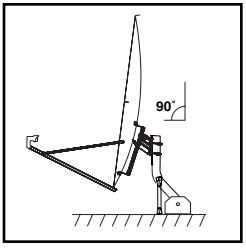
STEP 3.4B: ATTACHING THE MOUNT TO YOUR DWELLING (120 CM DISH)

The mount should be attached to your dwelling before putting the dish assembly on it. When fastening it to your wall or roof, etc., make sure that the top portion is "plumb"; you can get it right by using a spirit level on both the front and side of the top piece. It is important to affix the mount firmly to your structure with the appropriate fasteners so that the wind can't move it. The dish support mounting assembly requires an area of approximately 9 square feet to accommodate the mast mount foot and the two support struts.

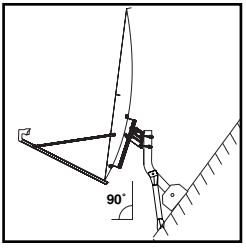
Note: Plumb means vertical in all directions. A flagpole is plumb.



WALL MOUNT

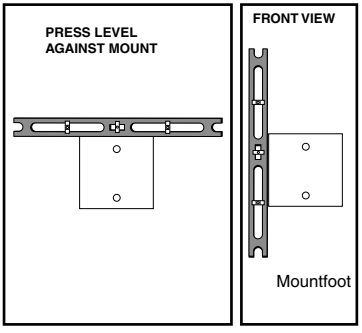


HORIZONTAL MOUNT



ROOF MOUNT

Here is how it can be done:



1. Place the mount foot on the surface location where you intend to attach it to the structure.
2. Mark the location of one of the 2 holes and remove the mount.
3. Drill the hole and attach the mount foot with the one fastener only.
4. Place a spirit level on the top and side of the foot and pivot the foot to make it level and plumb. Drill the other hole while the mount foot is still properly in place. (Alternatively, you can mark the hole, remove the mount, then drill)
5. Attach the mount with the 2 fasteners; seal the holes with silicone to prevent water damage to your dwelling.
6. Install the mast to the mount foot using the supplied fastener. Orientate the mast so that the short curved portion will face vertically.
7. Place a spirit level on the front face of the short curved portion of the mast and adjust the mast to a vertical position. Tighten the mast mounting bolt.

8. Attach the two struts to the mast with the supplied hardware. Tighten the bolt for a snug fit that still allows some slight movement of the struts.
9. Position the foot of each strut squarely on the mounting surface and mark the holes for drilling. Prior to drilling the strut holes, confirm with the spirit level that the mast is still vertical. This is a critical check to ensure proper alignment.
10. Drill the holes while the strut feet are still properly in place. (Alternatively, you can mark the holes, move the struts slightly, then drill.)
11. Attach the mount with the 4 fasteners; seal the holes with silicone to prevent water damage to your dwelling.
12. Tighten the strut attachment bolt which was installed in step 8. Place the level on the front face of the short curved portion of the mast to confirm that the mast is still vertical. There are no further adjustments to make to the mount.

If you have trouble fastening the mount to a surface, try mounting a solid piece of wood to your dwelling's surface first, then fastening the mount to the wood.

STEP 3.4C: INSTALLING THE DISH ON THE MOUNT (120 CM DISH)

You have installed the mount on your dwelling and you have pre-assembled the antenna unit, ready to be installed on the mount.

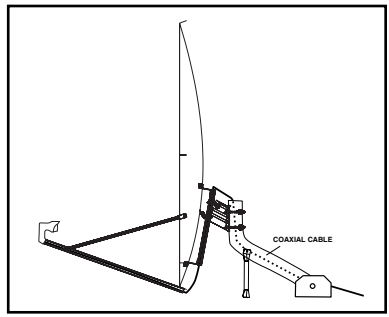
There are just a few steps here:

1. Slide the antenna assembly over the mast.
2. Lightly tighten the four nuts on the back of the mast clamp, so that the antenna can pivot in the East/West directions but not be loose.
3. You are ready to carry out the antenna alignments, as soon as the wiring in Step 3.4D is completed.

STEP 3.4D: CONNECTING THINGS TOGETHER (120 CM DISH)

The wiring is accomplished as follows:

1. Thread a length of coaxial cable through the mast pipe and mast clamp as shown in the diagram.
2. Route the coaxial cable through the feed support tube as shown in the diagram.



3. Slip the weather boot(s) onto the LNBF cable(s). To do this, insert the end of the cable with the screw connector into the smaller end of the boot and work it through. When you are finished the boot should slide freely over the cable but hold snugly when slipped up over the the screw connector. Be patient. This is a difficult and somewhat painstaking job. **(If possible, place weather boot on cable before putting on "F" connector**).
4. **Attach the LNBF to the LNBF cable(s). Slide the weather boot up securely to cover the cable/LNBF connection at the base of the LNBF.**
5. Slip the LNBF onto the end of the arm as shown, until contact is made with the LNBF bracket stops **and put in screw through arm and LNBF.**
6. Route and fasten the cable in a neat, unobtrusive manner in such a way so it cannot be damaged by accident. Connect the opposite end of the cable to your receiver, to the connector marked "Satellite In".
7. See page I-42 for instructions concerning safety grounding.

The assembly and mounting of the 120 cm Dish is now complete.
Proceed to page I-41 Installing the Receiver.

STEP 4: INSTALLING THE RECEIVER

Connect the output of the satellite receiver to your TV as described in the Bell ExpressVu User Manual, and turn on the Bell ExpressVu receiver. Use your new remote control to carry out the following steps (the remote control operation is fully described in the User Manual). Note that the Bell ExpressVu receivers are configured at the factory for English language operation. French language operation is available after the dish is aligned and the initial software download is complete.

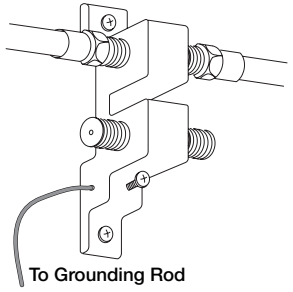
See “Wiring Setups” in the Bell ExpressVu User Manual for suggested wiring configurations.

GROUND AND WIRE THE SATELLITE ANTENNA

As with any such electronic devices, the satellite antenna and the coaxial cable(s) should be grounded in accordance with local electrical codes to protect against damage caused by lightning strikes and other electrical discharges. This section provides some suggestions on grounding both satellite antennae and the cable.

BEFORE YOU START

The following guidelines apply to all grounding systems:



GROUNDING BLOCK WITH LNBF CABLE

1. A copper-clad iron rod driven into the soil as close to your building as possible provides a good grounding. Check with local codes for details.
2. Locate the grounding block as close to the grounding rod as possible.
3. Using the shortest path possible, route the coaxial cable from the LNBF to the coaxial terminal on one side of the grounding block.
   If you are using a dual-port LNBF, route both coaxial cables to the grounding block.
4. For each coaxial cable attached to the grounding block, connect a second coaxial cable onto the coaxial terminal on the other side of the grounding block. This is the cable that you will route into the building to the receiver.
5. Connect the grounding block to the grounding rod according to local codes.

INSTALL THE GROUNDING BLOCK

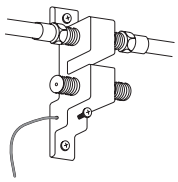
Depending on your mounting site and personal preference, you may want to install the grounding block onto the side of the building, or on some other sturdy structure near the satellite antenna. Be sure that the location is stable, and that you bolt the grounding block down securely.

Locate the grounding block as close to the grounding rod as possible.
Attach the Cable to the Grounding Block

1. Using the shortest path possible, route the coaxial cable from the LNBF to the coaxial terminal on one side of the grounding block.

If you are using a dual-port LNBF, route both coaxial cables to the grounding block.

2. For each coaxial cable attached to the grounding block, connect a second coaxial cable onto the coaxial terminal on the other side of the grounding block. This is the cable that you will route into the building to the receiver.

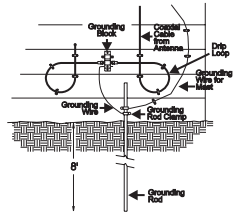


Grounding Block with LNBF Cable

3. Insert one end of the ground wire into the grounding terminal on the grounding block. Tighten the screw to hold the wire firmly.

4. Attach the other end of the ground wire to the clamp on the grounding rod. Tighten the screw to secure the ground wire to the grounding clamp. Tighten the grounding clamp to the grounding rod.

5. Use the cable clips to attach the cable to the side of the building. This helps prevent damage. The drip loops allow moisture to drip from the cables before being channeled into the grounding block or the building.



GROUNDING THE MAST

To protect your house and receiver, your antenna mast must also be grounded. To ground the mast, run a #6 copper stranded wire from one of the bolts in the mast foot to the grounding rod, using the shortest possible path.

WIRE FROM ANTENNA TO RECEIVER

- Use the shortest route possible to run the coaxial cable from the grounding block into the building and to your satellite receiver. Do not kink or pinch the cable. This may damage it.

- The simplest method is to locate your receiver inside the building against or near an outside wall. Then drill a 1/2-inch hole through the outer wall to pass the cable through to inside the building.

- If the receiver is located in an interior room, you should route the cable through the outside wall, and into an attic, basement, or crawl space to access the location.

- Seal the exterior hole with silicone or other weatherproof sealant material after installation.

- Once the cable is inside the building, you may attach it to a wall receptacle or directly to the receiver.

WARNING! Tighten the back panel coaxial cable connections only by hand. Using a wrench may over-tighten the connections, causing damage. Such damage is not covered by the Limited Warranty.

STEP 5: ALIGNING THE DISH

This is the final step to be completed before ordering your program package. If your antenna mast is plumb, it can be accomplished very quickly; however, be patient with the adjustments, as this step can be tricky.

The process of aligning the dish involves two steps. First, you must find the satellite to obtain a reading on the signal strength bar. Once this is accomplished, you fine adjust the dish pointing for maximum signal strength and obtain a solid locked signal. Finding the satellite is the most challenging of the two operations.

If you can see and hear your television from where your dish is mounted, the dish alignment can be carried out easily by one person.

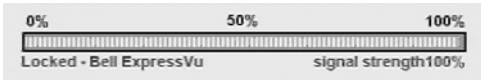
The adjustment of the antenna is usually accomplished by two people. One person will be positioning the antenna, while the other person provides information about the effect of the adjustments by watching the signal strength bar on the television. These two people must be able to communicate, in order to obtain a peak signal level. This communication can be achieved by using a cell phone and a house phone, two walkie-talkies, a baby monitoring system or even shouting. We suggest the following procedure:

1. Make sure that the Vertical Elevation has been set according to the Satellite Location Table (page I-50).

2. Point the antenna in the direction of the satellite, as described earlier in **Step 2**, with a compass. For reference, mark this starting point on the antenna clamp and mast with a pencil.

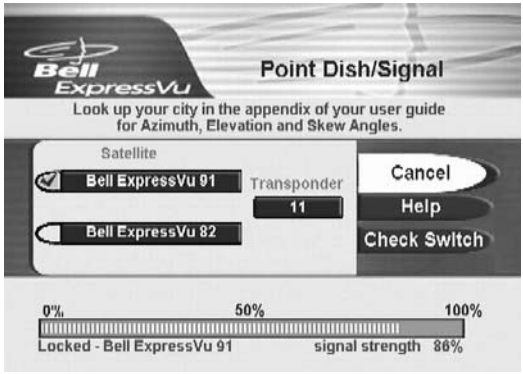
3. Power on the receiver.

	Remote Buttons	Menu Options
4. Press the **Menu** button to open the **Main Menu.**	MENU	
5. Select the **System Setup** option.	mno 6	6 System Setup
6. Select the **Installation** option.	1	1 Installation
7. Select the **Point Dish and Signal Strength** option.	1	1 Point Dish/Signal



You will now see the **Point Dish and Signal Strength** menu.

8. You must now enter the correct number transponder. Use your cursor controls to enter no.11 in the transponder box on the screen.

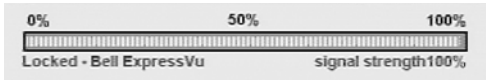


9. Now you are ready to carry out the alignment of your dish.

ATTENTION!

Avoid positioning yourself directly in front of the satellite antenna while aiming it, as your body may block much or all of the satellite signal.

Note: The signal strength indicator will turn from red to green and audio tone will increase in pitch as you get closer to optimizing the dish. Once you see a clear picture on your TV, a stronger signal will not noticeably affect the picture quality, however, it is important to continue adjustments until the absolute maximum signal strength is obtained, to ensure the most reliable signal possible in all weather conditions.



When you are fine-tuning the antenna position, the **Signal Strength** bar in the **Point Dish** and **Signal Strength** menu shows you the signal level you are receiving. The possible levels are between 0% and 100%. It is not necessary for the signal strength to reach 100%, and you will most likely not get the signal strength to this level.

Once a signal level is indicated on the signal strength bar is green and says "Locked - ExpressVu" you have found the correct satellite and may proceed with signal level optimization (**Note:** As the dish is moved into position, it is possible to receive a signal from an incorrect satellite. If this occurs the signal strength bar will remain red, the audio tone will continuously beep, and the text below the bar will indicate "wrong satellite". To check if you're pointed to the right satellite, 'ExpressVu' should be displayed message below the signal strength bar).

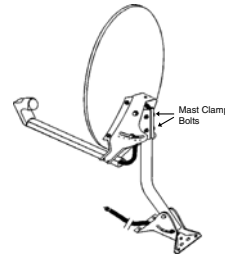
Look at the **Signal Strength** bar.

- If it is *red* and displays the word, "Unlocked," you may be aiming the dish at the correct satellite but without a strong enough signal for a picture. The signal tone will be beeping.
- If it is *red* and displays the words "Wrong Satellite " you may be aiming the dish at a satellite other than Bell ExpressVu's. The signal tone will be beeping.
- If it is *green* and displays the words "Locked ExpressVu," you are aiming the dish at the correct satellite and should have a strong enough signal for a picture. The signal tone will be steady. It rises as the signal gets stronger, and lowers as the signal strength drops. You are now ready to fine tune your antenna to obtain the highest signal strength reading possible.

10. Now that the receiver has been setup to display the correct screen you are ready to adjust the dish to find the satellite. If a signal level is not indicated on the signal strength bar, loosen the mast head clamp bolts slightly and pan the dish a tiny bit in one direction and remove your hands from it. Keep doing this, in very small increments, until you swing the dish about 10 degrees. The system takes a second to display the signal strength, so you must pause between adjustments. Your partner at the TV set should inform you at each step if there is an indication on the meter. The conversation usually goes something like this:

" Ok, I moved it"
" No Change"
" OK, I moved it some more"
" Hold it ... I see something on the meter ... , move it some more"
" Ok I moved it some more, any change ?"
" Yes ... It's getting better"
... and so it goes

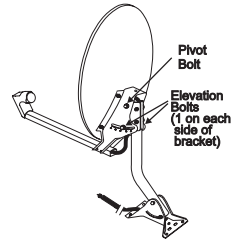
Slowly move the dish from side to side until you find the strongest signal. If you don't find it in the one direction rotate the antenna back to the marked position and carry out the procedure again, this time with the same small movements in the opposite direction. Tighten the mast clamp bolts just enough so the dish cannot be moved horizontally.



11. Loosen the elevation bolts and the pivot bolt just enough to be able to move the support bracket. Slowly move the dish up and down until you find the strongest signal. Tighten the elevation bolts and pivot bolt just enough so the dish cannot be moved vertically.

    Note: Make each of these adjustments individually, loosening the bolts or screws before each movement and tightening them again before the next movement.

12. Repeat steps 11 and 12 until the **Signal Strength** bar is green, the word "Locked" is displayed, and you have gained the strongest signal possible.



ATTENTION!

Remember: very small adjustments - less than one degree are required at this point. You need to adjust the dish until your signal strength for transponder 11 is at least 70%. If under clear skies you cannot consistently get at least 70% signal strength on your transponder 11 you may require a larger dish. Contact your dealer.

13. Confirm that you have a picture and the strongest possible signal strength on the **Point Dish** and **Signal Strength** menu.
14. Tighten all the bolts to prevent movement of the satellite antenna.
15. We recommend that you mark the final locations on the mast and mounting bracket with a permanent marker. This assists you later if you have to realign the antenna because of movement due to wind or weather.

    Note: Do not scratch the painted surfaces to mark them. This will cause rusting.

16. Select the **Continue** option on the screen. When the **Continue** option is selected, another screen will appear that tells you not to disturb the receiver, and that it is downloading software. The receiver is retrieving software from the satellite necessary for it to run. You can select the **Ok** option, or you can just wait for the download to finish. Other than selecting **Ok**, do not disturb the receiver until the download finishes. This may take a few minutes.

17. Once the download is complete you are ready to order your program package by calling the Bell ExpressVu Customer Service Call Centre at1-888-SKY-DISH. See page I-57.

18. If you want the Bell ExpressVu system menus to appear in French, follow the instructions in the section “Change Languages” below.

CHANGE LANGUAGES

To change the menu and screens language from English to French or vice versa, do the following:

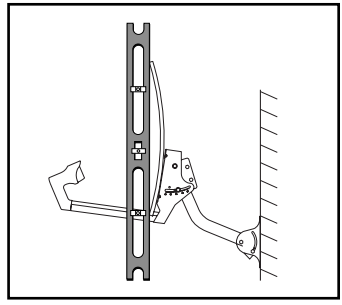
	Remote Buttons	Menu Options
1. Press the **Menu** button to open the **Main Menu.**	MENU	
2. Select the **System Setup** option.	mno 6	6 System Setup
3. Select **Installation**.	1	
4. Select the **Language Setup** option.	tuv 8	8 Language Setup
5. You will see a screen that asks you which language you want. Select English or French, then select the **Save** button on the screen. From now on, most screens will appear in the language of your choice.		

HELP

If you can't find the satellite or suspect that your mast assembly is not exactly plumb, try the following:

With your compass, aim the dish toward the satellite to the best of your ability. Now, put your spirit level vertically across the dish, as shown in the diagram, and adjust the antenna on the elevation pivot so that the antenna is vertical. In this position note the reading on the elevation gauge, this is the base vertical angle (BV) of your installation. If your antenna mast was perfectly plumb, the gauge would read 22.50. Determine the difference between your BV angle and the angle of 22.50. This difference represents the vertical correction factor which is required for your installation. If your BV angle is greater than 22.50 , add the correction factor to your Vertical Elevation from the Table (page I-53) to produce your revised elevation angle. If your BV angle is less than 22.50, subtract the correction factor from your Vertical Elevation from the table to produce your revised elevation angle. Now, set the antenna's vertical position to the revised elevation angle and proceed with panning the dish as outlined in Step 11 of the procedure.

As an example here: if your "BV" angle is measured to be 20.5 degrees and you live in Calgary where the satellite's vertical elevation is 27.6 degrees, the difference between your BV angle and 22.50 (your correction factor) is 2.0 degrees. Since your BV angle is less than 22.5 degrees, subtract 2.0 degrees from 27.6 degrees to obtain your revised Vertical Elevation of 25.6 degrees.



SATELLITE LOCATION TABLE ("LOOK" ANGLES)

Community	DBS Nimiq (@ 91W))		
	Compass Direction	Vertical Elevation	Skew
ALBERTA			
Athabasca	130.7	23.8	72.2
Banff	126.0	25.4	68.4
Brooks	132.3	27.8	70.3
Calgary	129.2	26.1	69.7
Camrose	132.4	25.0	72.2
Drumheller	130.7	26.5	70.3
Edmonton	130.7	23.8	72.2
Fort McMurray	133.8	21.6	75.1
Fort Vermilion	125.2	19.3	73.1
Grande Prairie	121.4	20.8	69.6
Grimshaw	122.7	20.3	70.8
Hana	132.4	26.9	70.9
Jasper	123.1	22.9	68.7
Lethbridge	130.6	27.4	69.6
Lloydminster	135.8	25.7	73.4
Meander River	123.4	18.1	73.2
Medicine Hat	134.0	28.1	71.0
Peace River	124.2	20.7	71.3
Red Deer	129.2	25.2	70.3
Slave Lake	127.4	22.2	71.7
BRITISH COLUMBIA			
Campbell River	114.2	22.2	62.7
Chilliwack	117.8	24.4	63.4
Cranbrook	125.9	27.1	67.0
Dawson Creek	120.1	20.4	69.1
Dease lake	108.1	13.2	68.9
Fort Nelson	115.2	16.1	70.5
Fort St.John	118.5	19.2	69.3
Kamloops	120.4	23.7	66.1
Kelowna	121.8	25.0	65.9
Kitimat	109.5	17.4	64.1
Nanaimo	115.3	23.4	62.3
Penticton	121.7	25.8	65.2
Port Alice	111.9	21.2	61.7
Price George	116.4	20.0	66.8
Prince Rupert	108.3	16.9	63.7

Community	DBS Nimiq (@ 91W)		
	Compass Direction	Vertical Elevation	Skew
Quesnel	117.7	21.2	66.6
Revelstoke	123.1	24.6	67.3
Valemount	121.7	22.5	68.2
Vancouver	116.6	23.9	62.7
Vernon	121.8	25.0	65.9
Victoria	116.5	24.6	62.1
Williams Lake	117.7	22.0	65.8
MANITOBA			
Brandon	155.2	31.3	79.0
Churchhill	172.9	22.7	85.6
Dauphin	153.3	30.0	78.6
Grand Rapids	158.2	28.3	80.8
Gypsumville	159.8	30.6	80.9
Hodgson	162.2	30.8	81.7
Lynn Lake	154.5	23.9	80.8
Portage La Prairie	159.6	31.7	80.6
The Pas	153.9	26.9	79.8
Thompson	161.3	25.4	82.4
Winnipeg	161.9	31.8	81.4
NEW BRUNSWICK			
Bath	225.2	33.7	107.7
Bathurst	227.0	31.4	107.4
Dalhousie	227.0	31.4	107.4
Edmundston	223.7	33.0	106.4
Fredericton	225.2	33.7	107.7
Grand Falls	184.2	36.0	89.5
Moncton	228.3	33.0	109.3
Oromocto	226.9	33.3	108.5
St. John	226.8	34.3	109.2
Woodstock	226.9	33.3	108.5
NEWFOUNDLAND			
Bonavista	243.1	26.1	116.2
Corner Brook	237.8	27.5	112.3
Gander	241.3	26.2	114.2
Grand Bank	240.0	28.3	115.1

Community	DBS Nimiq (@ 91W)		
	Compass Direction	Vertical Elevation	Skew
Springdale	240.2	25.8	112.9
St Anthony	240.4	25.0	112.2
St Johns	243.1	26.1	116.2
NORTHWEST TERRITORIES			
Fort McPherson	101.6	7.6	73.0
Fort Simpson	118.6	15.7	75.0
Fort Smith	134.4	19.7	78.0
Hay River	127.3	18.1	76.0
Inuvik	101.9	7.3	75.0
Norman Wells	109.9	11.4	75.0
Yellowknife	128.5	16.8	78.0
NOVA SCOTIA			
Cape Breton Isl	234.0	31.4	112.4
Halifax	229.9	33.6	110.8
Port Hawkesbury	234.1	32.3	113.1
Springhill	229.8	32.6	110.0
Sydney	235.4	31.0	113.1
Trenton	203.9	38.6	98.6
Truro	231.3	33.2	111.6
Wedgeport	226.8	36.2	110.4
Yarmouth	226.8	35.3	109.8
NUNAVUT			
Arctic Bay	239.6	8.4	92.0
Baker Lake	174.9	17.3	87.5
Broughton Island	252.3	11.5	101.0
Cambridge Bay	144.8	11.8	85.0
Cape Dorset	223.9	17.0	97.0
Clyde River	253.6	9.5	97.5
Coppermine	122.5	11.7	80.5
Eureka	262.6	2.02	91.0
Gjoa Haven	181.8	12.9	88.0
Grise Fiord	251.6	5.11	92.0
Hall Beach	231.5	12.5	94.0
Iqualuit	241.6	15.8	101.0

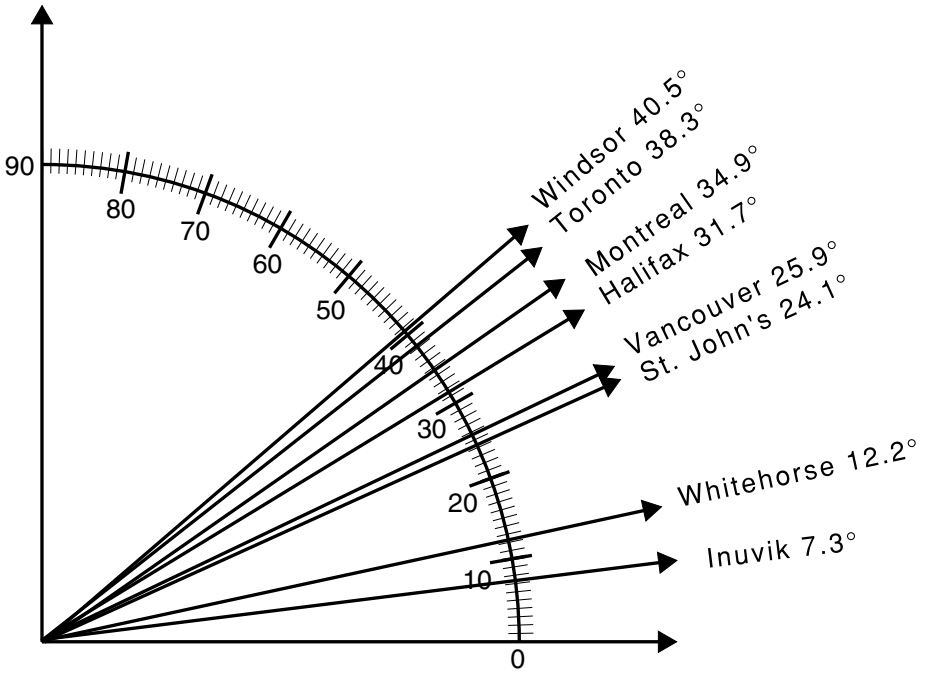
Community	DBS Nimiq (@ 91W)		
	Compass Direction	Vertical Elevation	Skew
Lake Harbour	238.5	16.9	101.0
Pond Inlet	249.5	8.4	99.5
Rankin Inlet	186.4	19.0	89.5
Repulse Bay	212.2	15.1	92.0
Resolute Bay	217.8	6.8	89.0
ONTARIO			
Bancroft	204.1	37.5	98.3
Barrie	199.5	38.9	96.6
Belleville	206.1	38.4	99.6
Bradford	201.7	38.7	97.6
Brockville	208.4	37.1	100.3
Burlington	201.6	39.8	97.9
Cobalt	200.4	35.6	96.0
Collingwood	199.5	38.9	96.6
Cornwall	212.5	36.7	102.1
Elliot Lake	195.5	36.9	94.3
Fort Frances	170.7	33.4	84.4
Fort Severn	186.3	26.2	89.0
Geraldton	185.3	32.7	89.6
Goderich	195.0	39.1	94.6
Guelph	199.4	40.0	96.9
Haliburton	204.0	37.5	98.3
Hanover	197.3	39.0	95.6
Hearst	192.5	32.7	91.2
Huntsville	201.9	37.8	97.4
Kenora	168.7	32.2	83.8
Kingston	206.1	38.4	99.6
Kirkland lake	200.6	34.5	95.8
Kitchener	199.4	40.0	96.9
London	197.0	40.1	95.8
Mattawa	204.4	36.4	98.1
Moosonee	199.8	31.4	94.4
Nipigon	182.6	33.8	88.7
North Bay	202.3	36.6	97.1
Ottawa	208.4	37.1	100.3
Owen Sound	197.6	37.8	95.4
Parry Sound	199.8	37.8	96.4
Pembroke	206.5	36.2	99.0

Community	DBS Nimiq (@ 91W)		
	Compass Direction	Vertical Elevation	Skew
Perth	208.4	37.1	100.3
Sarnia	194.8	40.2	94.8
Peterbrough	203.9	38.6	98.6
Sault St. Marie	191.1	37.0	92.4
Sioux Lookout	173.4	32.6	85.4
Sudbury	198.1	35.7	95.1
Thunderbay	179.8	34.8	87.8
Timmins	198.9	33.5	94.7
Tobermory	195.3	38.0	94.5
Toronto	199.8	37.8	96.4
Welland	201.6	39.8	97.9
Windsor	192.2	41.4	93.9
PRINCE EDWARD ISLAND			
Charlottetown	231.4	32.2	110.9
Summerside	231.4	32.2	110.9
QUEBEC			
Chibougamau	213.8	31.5	100.2
Chicoutimi	218.8	32.9	103.3
Drummondville	214.6	35.6	102.6
Gaspe	228.8	30.1	107.5
La Tuque	214.8	34.4	102.2
Mont-Laurier	208.8	35.0	99.6
Montreal	212.6	35.7	101.7
Quebec	218.5	33.9	103.9
Rimouski	222.2	32.3	105.0
Rouyn	202.8	34.4	96.7
Sept-Illes	225.9	29.8	105.5
Sherbrooke	216.4	36.2	104.0
Trois-Rivieres	214.6	35.4	120.6
Val d'Or	205.0	34.3	97.5
SASKATCHEWAN			
Estevan	148.7	31.6	76.2
Hudson Bay	151.6	27.8	78.8
Kindersley	137.5	27.9	72.9

Community	DBS Nimiq (@ 91W)		
	Compass Direction	Vertical Elevation	Skew
La Ronge	145.5	25.1	77.6
Moose Jaw	143.0	29.8	74.5
Moosomin	135.7	28.5	71.7
North Battleford	139.4	26.3	74.7
Prince Albert	143.3	26.8	76.0
Regina	145.1	29.1	75.7
Saskatoon	141.3	27.5	74.8
Stony Rapids	159.8	22.1	82.7
Swift Current	141.1	29.5	73.8
Urainium City	137.0	19.1	77.2
Yorkton	151.2	29.8	77.9
YUKON			
Carmacks	103.6	10.8	69.0
Dawson	100.6	8.5	70.0
Haines Junction	103.1	11.2	68.0
Ross River	106.8	12.2	70.0
Watson Lake	111.1	14.8	70.5
Whitehorse	105.1	12.2	68.5

VERTICAL ELEVATION PROTRACTOR - NIMIQ

Use the Satellite location chart and this protractor to determine your dish elevation measurement.



CONNECT RECEIVER TO TELEPHONE CONNECTION

Your Bell ExpressVu receiver(s) must be connected to a telephone line at all times. To connect your receiver to a phone line, plug one end of the telephone cord provided to the connection at the back of the receiver, and plug the other end into an active telephone jack.

The telephone connection is required for several features, including some remote diagnostics; the use of multiple receivers in the same household at no additional monthly charge; and pay-per-view (PPV) purchases. In the case of multiple receivers in the same household, all of the receivers must be connected to phone lines with the same telephone number.

The receiver calls Bell ExpressVu's Customer Service Call Centre on a regular basis. These calls use a toll-free number and will not appear on your telephone bill. The receiver will never interrupt your own telephone calls. If you try to make a call while the receiver is using the line, the receiver will immediately hang up and try its call later.

HOW TO TEST THE SYSTEM

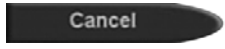
HOW TO START ANY TEST

	Remote Buttons	Menu Options
1. Press the **Menu**.		
2. Select the **System Setup** option.		
3. Select the **Diagnostic** option. 4. Select the option for the test you want to do.		

HOW TO TEST THE TELEPHONE CONNECTION

1. Make sure that an active telephone line is connected to the **Phone Jack** on the receiver back panel
2. Select the Connection option. The receiver displays a message that asks you to wait until the test is done.

- If the telephone connection is correct, the receiver displays a message that says so.
- If the receiver displays a message that says it needs to make a toll-free call to the Customer Service Center, select the **Dial Out** option. The receiver displays a message that asks you to wait until the call is done. When the call is done, select the **Cancel** option.

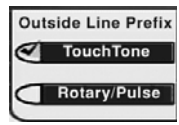


- If the telephone line is not connected properly, the receiver displays a message that says so. In this case, check the telephone connection and then repeat the test.

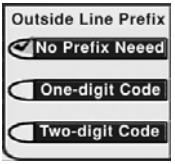
You must also set up the receiver for the type of telephone system you have (touchtone or rotary/pulse), and specify a telephone number prefix, if such a prefix is required to place an outside call.

Note: A prefix is usually required *only* for business installations. For most residential installations, the default setting of **No prefix needed** will enable correct operation. In this case, all you need to do is specify the telephone type.

Do the following:

	Remote Buttons	Menu Options
1 Press the remote control **Menu** button. The receiver displays the **Main Menu**.		
2. Select the **System Setup** option. The receiver displays the **System Setup** menu.		
3. Select the **Installation** option. The receiver displays the **Installation and Setup** menu.		
4. Select the **Telephone System** option. The receiver displays the **Telephone System Setup** menu.		
5. Use the **Up/Down/Left/Right** arrow buttons to move the highlight to the **TouchTone** or the **Rotary/Pulse** option in the **Phone Type** list.		
Press the **Select** button to select the highlighted option.		
Note: A telephone number prefix is usually required *only* for business installations. For most residential installations, all you need to do is specify the telephone system type. The default prefix setting of **No prefix needed** will enable correct operation. If this is the case, highlight and select the **Save** option to save the above setting, and stop here.		
If you do need to specify a telephone number prefix, then *instead* of selecting the **Save** option, go on to the next step.		

6. Use the **Up/Down/Left/Right** arrow buttons to move the highlight to the **One-digit code** or the **Two-digit code** option in the **Outside Prefix List.**



Press the **Select** button to select the highlighted option.

7. If you selected the **One-digit code** option, the receiver displays and highlights a box where you *must* enter the digit. Press the appropriate number pad button to do this.

If you selected the **Two-digit code** option, the receiver displays two boxes (highlighting the top box) where you *must* enter the digits. To do this, do the following:

a) Press the appropriate number pad button to enter the first digit in the top box.

b) Press the Down arrow button to move the highlight to the bottom box.

c) Press the appropriate number pad button to enter the second digit in the bottom box.

8. Use the **Up/Down/Left/Right** arrow buttons to move the highlight to the **Save** option.

Press the **Select** button to save the above settings.

ORDER YOUR BELL EXPRESSVU PROGRAMMING

This procedure notifies the Bell ExpressVu Customer Service Call Centre that your system is on-line and installed. You need to have your services activated before you can start enjoying your desired programming. Prior to authorization, you will see the Bell ExpressVu XPRS Preview Channel and perhaps an unscrambled program channel such as CBC. You must authorize your services when you first install your Bell ExpressVu system, and whenever you request to add or remove services.

All you need to do is call the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH and notify them that your system has been installed and you would like to begin receiving programming. The Service Representative will explain the available program packages and à la carte services and take you through the authorization procedure and software download steps. When the services are authorized, you should see channels other than the Bell ExpressVu Preview Channel.

You will need to give the Service Representative information about your system. To get this information, do the following. Power the receiver OFF, using the remote control Power button (not the receiver **Power** button). Ensure that the remote control is in SAT mode, (applies only to certain models and receivers), then press the **Info** or **System Information** button on the remote. This will display the **Important System Information** menu, as shown below. To exit from this menu, press the **Select** button on the remote.

Note: Even though there is information on the screen the receiver is still OFF. You will have to press the **Power** button on either the remote or the receiver to turn the receiver back ON.

SERVICE CENTRE PIN

As an option, the Service Representative will ask you if you want to establish a Bell ExpressVu Customer Service Call Centre Personal Identification Number (PIN). See “Security Features” on page I-61 for more information.

Bell ExpressVu

Bell ExpressVu Pre-Authorized Payment Plan

The Easy Way To Pay –

WHAT IS IT?

- The Bell ExpressVu Pre-Authorized Payment Plan is a service that allows you to automatically pay your monthly invoice by using your chequing account. It's a safe, reliable way to pay your bill and eliminate the hassle of writing cheques, buying stamps, and sending payments through the mail. Even when you're out of town, your Bell ExpressVu bill will be automatically paid.

Save Time and Money • Reduce Paperwork • Eliminate Lost or Late Payments • Decrease Cheque Writing

HOW DOES IT WORK?

- Each month you will receive your Bell ExpressVu bill in the mail. The amount of your bill will be automatically deducted from you chequing account twenty (20) calendar days from your statement date. If you disagree with your bill, call us immediately to resolve any discrepancies.

HOW DO I ENROLL?

- Carefully complete and sign the attached authorization agreement. Your Bell ExpressVu account number is especially important. This 16-digit number is located on the upper right corner of your statement. Please be sure to include this number on your form.
- Attach one of your unsigned cheques clearly marked "VOID" for the bank account you plan to use, to the completed pre-authorization payment plan agreement. Attaching a voided cheque is the easiest way to ensure that all the bank account information is correct. It helps avoid any mistakes that may slow down the enrollment process. For payment withdrawals from a savings account, please request a counter cheque from your financial institution.
- Return the completed agreement and voided cheque with your next payment for your account, or send it in a separate envelope to the address listed at the bottom of the pre-authorization payment plan agreement.
- Please ensure you enclose a cheque for payment of your current Bell ExpressVu statement.

WHEN DOES THE PLAN START?

Please continue to pay your bill in the usual manner until a message appears on your statement confirming that you have been successfully set up on our Pre-Authorized Payment Plan. This process should take approximately four (4) to six (6) weeks.

TERMS & CONDITIONS

- This Pre-Authorized Payment Plan is for the convenience of the customer. Bell ExpressVu does not charge for this service.
- The customer certifies that the information is correct and that the customer will notify Bell ExpressVu of any changes.
- The customer certifies that their bank account is in good standing with sufficient funds to cover the authorized payments as they come due.
- If the bank account designated does not have sufficient funds, the customer will be liable for both the NSF payment charges and any applicable late payment fees.
- All pre-authorized payments will be drawn only on Canadian financial institutions in Canadian funds. The use of line of credit cheques or credit card cheques are not eligible for the plan.

CANCELLATION

- This agreement can be terminated, upon written notification, at any time, by the customer or Bell ExpressVu. Your notification must be received in our offices at least 14 days prior to your next invoice date.
- Upon termination of the pre-authorized payment plan, any amount owing will be paid directly to Bell ExpressVu.
- We require a minimum of 14 days to process your cancellation request.

Bell ExpressVu Pre-Authorized Payment Plan

For the convenience of pre-authorized payments, please complete this form and send it with a void cheque to Bell ExpressVu at the address indicated below:

I hereby authorize Bell ExpressVu to withdraw monthly, from my financial institution, the amount due on my Bell ExpressVu Statement. I acknowledge that the withdrawal will occur approximately twenty (20) days after the billing date on my Bell ExpressVu statement. I understand that Bell ExpressVu does not charge for this service although my bank or trust company may. This authority is to remain in effect until I notify Bell ExpressVu, in writing, Attention: Billing Department, 115 Scarsdale Road, North York, ON, M3B 2R2 or by Fax at (416) 382-5833, or until Bell ExpressVu notifies me in writing. I acknowledge that I am aware of all the terms and conditions that Bell ExpressVu has listed.

PERSONAL INFORMATION

Your Name: _____
PLEASE PRINT YOUR NAME AS IT APPEARS ON YOUR STATEMENT

Telephone Number: ( ) _____

Bell ExpressVu Account: 8455- _____

Alternate Telephone Number: ( ) _____

Address: _____
ADDRESS APT. # OR P.O. BOX #

_____
CITY/TOWN PROVINCE

_____
POSTAL CODE

BANKING INFORMATION

Name of your financial institution: _____ *Account Number:* _____

Transit Number: _____ *Telephone Number: ( )* _____

Address: _____
STREET ADDRESS

_____
CITY/TOWN PROVINCE POSTAL CODE

PLEASE ATTACH AN UNSIGNED CHEQUE MARKED "VOID" TO THE COMPLETED AGREEMENT.

AUTHORIZED SIGNATURES*

Signature _____ *Date* _____
NAME (PLEASE PRINT CLEARLY)

Signature _____ *Date* _____
NAME (PLEASE PRINT CLEARLY)

**All signatures are required for accounts with joint signatures.*

PROGRAM THE REMOTE

For certain models of Bell ExpressVu receivers you can program the remote to control not only the receiver, but your VCR, TV, and amplifiers. This remote supports most brands and models; however, there may be some brands or models that it does not support. You can program the remote to control a maximum of four different electronic components. Which component is being controlled by the remote depends on the current mode of the remote:

- The satellite receiver (controlled in SAT mode)
- The TV set (controlled in TV mode)
- A VCR (controlled in VCR mode)
- One auxiliary item, such as an amplifier, a cable TV box, or a second TV or VCR (controlled in AUX mode).

Before beginning the following procedures, make sure that all electronic components are powered ON. Make sure that there are fresh batteries installed in the remote.

The remote is already programmed to control the receiver. However, if any of the following conditions apply, you will need to match the remote's address to the receiver's address:

- You have multiple receivers and remotes.
- Your receiver does not respond to remote commands (even with fresh batteries installed in the remote).
- Your remote is damaged and replaced with a new unit.

For instructions on how to do this, as well as for full instructions for your remote control, please refer to your User Manual.

SECURITY FEATURES

There are two levels of security: receiver security and Bell ExpressVu Customer Service Call Centre security. Each method works independently of the other. You can use either method or both methods, or you can decide not to use the security features at all.

RECEIVER SECURITY

Receiver security locks control which channels or programs can be viewed, and whether services such as Bell ExpressVu PPV events can be purchased using the receiver. Locked programs or channels require the viewer to enter a password for viewing them. For example, you can set programs with violence to be security locked.

The ratings and extended ratings (content) code locks that are used for security locks reflect the codes that were assigned to the programs by the original program providers. These codes are provided for your assistance, but you should be aware that the actual content of the programs may differ from the assigned codes.

When you lock the system, you must enter and verify a password. Thereafter, this password must be used to unlock the system. You can change this password at any time.

If you lock the system, and then forget your password, you will not be able to watch locked programs using the receiver. You cannot reset the receiver to default settings to discard a password that you have forgotten. You will need to call the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH to authorize them to override your receiver password. After this is done, you will need to define a new password for the receiver if you want to use the security locks.

Once you lock the system, the security locks that you have defined are activated. Also, additional cost services (such as PPV programs) are automatically security locked when you lock the system. This means you will have to enter your password to get PPV programs.

If you attempt to access a locked item (such as a locked channel), you will be asked to enter the password. You are allowed three attempts to enter the correct password. If the correct password is not entered, the receiver will not allow more attempts for several minutes.

If you enter the correct password, you can then see the locked item. If you exit the locked item, you must reenter the password to see it again.
You can unlock the system so that you will not be prompted for the password again. The system will be unlocked until you lock it again.

BELL EXPRESSVU CUSTOMER SERVICE CENTRE SECURITY

You can set up a Personal Identification Number (PIN) that is assigned to your account at the Bell ExpressVu Customer Service Call Centre Thereafter, this PIN will be requested by the Bell ExpressVu Customer Service Call Centre to authorize any transactions to your account. This includes purchasing services, account inquiries, and overriding the receiver security password.

You can select the PIN when you first turn on your service, or at any time thereafter.

If you forget your PIN, you will need to speak with a Bell ExpressVu Customer Service Representative at 1-888-SKY-DISH. The Bell ExpressVu Customer Service Representative may ask for additional information to confirm that you are authorized to make transactions on your account.

WIRE YOUR SYSTEM TOGETHER

MULTIPLE RECEIVERS

Each output on the LNBF can support a single receiver. You cannot connect two receivers to the same output (for example, by using a line splitter), because the two receivers would interfere with each other during channel selection. This is a characteristic of satellite television in general, and is not a limitation that is specific to this Bell ExpressVu system.

If you want to connect two receivers to the same Bell ExpressVu satellite antenna and be able to watch different channels on each, you must use a dual-output LNBF. This allows you to connect each receiver to a different output, preventing interference between the receivers. In this case, during installation you must run a separate coaxial cable from each output on the LNBF to each receiver.

If you want to purchase an LNBF different from the one that you originally purchased, contact your local Bell ExpressVu Authorized Agent.

The following wiring setups assume installation of a single receiver. If you are installing multiple receivers, modify your wiring accordingly.

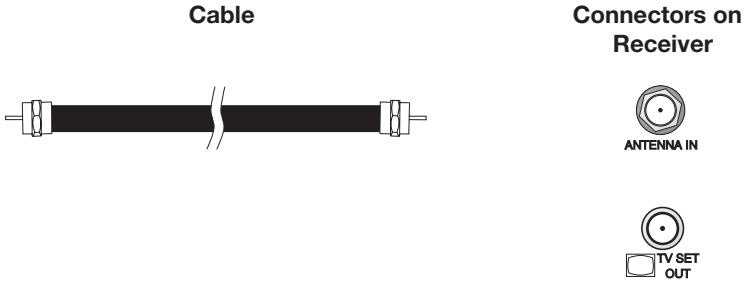
ABOUT CABLING AND CONNECTIONS

The way in which you wire your system and the kinds of cabling you choose can make a noticeable difference in the quality of the picture and sound. We recommend that you wire your system to take advantage of the highest quality supported by your equipment. You will need to examine your electronic equipment to determine what type of connectors and cables, and which wiring setup to use.

Do the following:

1. Look on the back of each piece of equipment that you are planning to install with the Bell ExpressVu receiver and note the type of connectors on the equipment.
2. Starting from the connectors that support the highest quality, determine which pieces of equipment can be connected together using the designated type of cable.
3. Review the wiring setups in your Bell ExpressVu User Manual to determine which one is the closest to your planned configuration.
4. Use that setup as the basic plan to wire your system together. If you have additional components, or do not have all of the components that are in the setup, adjust the wiring accordingly.

RF OR VHF CONNECTIONS (GOOD PICTURE AND SOUND)



The RF or VHF connections (also called the modulator connections) provide good picture and good mono ("non-stereo") sound quality. Be aware that even if you have a TV and other equipment that support stereo sound, this type of connection will give you only non-stereo sound.

If you connect a cable TV box or broadcast TV antenna to the receiver, you must use the RF or VHF connections for the local cable or broadcast television signal input and output. This is true even if you use the phono (RCA) or S-VIDEO connections from the receiver to gain quality for picture and sound. The following wiring setups include the RF or VHF connections based on the assumption that you will also have cable TV or a broadcast TV antenna.

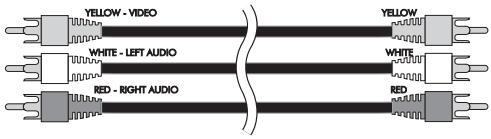
This is the simplest wiring setup, and many people prefer it because it is easy to install and use. The RF or VHF connections require that you keep the TV tuned to either channel 3 or 4 to view satellite channels.

Using the RF or VHF connections allows you to quickly switch from satellite programming to local or cable programming using one of the following methods:

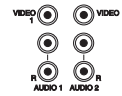
- Press the TV/Video button on the remote, or
- Turn OFF the receiver

PHONO (RCA) AUDIO/VIDEO CONNECTIONS (BETTER PICTURE, BEST SOUND)

Cable



Connectors on Receiver



The phono (RCA) connections provide better picture quality and the best stereo sound. You should use this type of connection for audio, if possible, and for the video if your equipment does not support S-VIDEO (see following).

The phono (RCA) cable is available as a single cable with three connectors on either end, or as three separate cables. The connectors are colour-coded according to the type of signal they carry.

- The yellow connector carries the video signal.
- The white connector carries the left audio signal.
- The red connector carries the right audio signal.

If your TV only has one input connection for this type of audio, connect it to the right **(R)** audio connection on the receiver.

If you use the phono (RCA) connections to connect the receiver with the other equipment, connect the cable from your cable TV box or broadcast TV antenna directly to the RF or VHF connection on your TV or VCR.

You cannot use the methods described for the RF or VHF connections to switch between local and satellite TV programming. Depending on the type of equipment that you connect to the receiver, you may need to use the menus displayed by each piece of equipment to change the input from local to satellite TV. See the product documentation that came with your other electronic equipment for more information.

S-VIDEO CONNECTIONS (BEST PICTURE)

Cable

Connectors on Receiver

S-VIDEO, also called super-video or SVHS, provides the best possible picture. Many newer TVs and VCRs support S-VIDEO. If you use these connections, you must still connect the audio signal using the phono (RCA) audio connectors; however, you would not use the phono (RCA) video connectors. The S-VIDEO connections carry only the video signal.

WIRING SETUPS

The following wiring setups present most potential options that you may choose to include in your setup. Many of these options depend on what electronic components you are connecting, and what type of connectors the components support. See "About Cabling and Connections" on page I-63 for more information.

Most of the wiring setups assume the following:

- You have a cable TV box, or a broadcast TV antenna that you want to connect to the system.
- You want to optimize your system to carry the best picture and sound quality that it can support.
- You want to be able to order Bell ExpressVu PPV programs using the Bell ExpressVu receiver.

The wiring setups presented here range from easiest (RF or VHF connections only), with the fewest electronic components, to the most advanced, with multiple electronic components. All connections are shown in most of the setups. You should use only one type of audio and one type of video connection. The exception to this is to also use the RF or VHF connections if you are connecting a cable box or a broadcast TV antenna to the system.

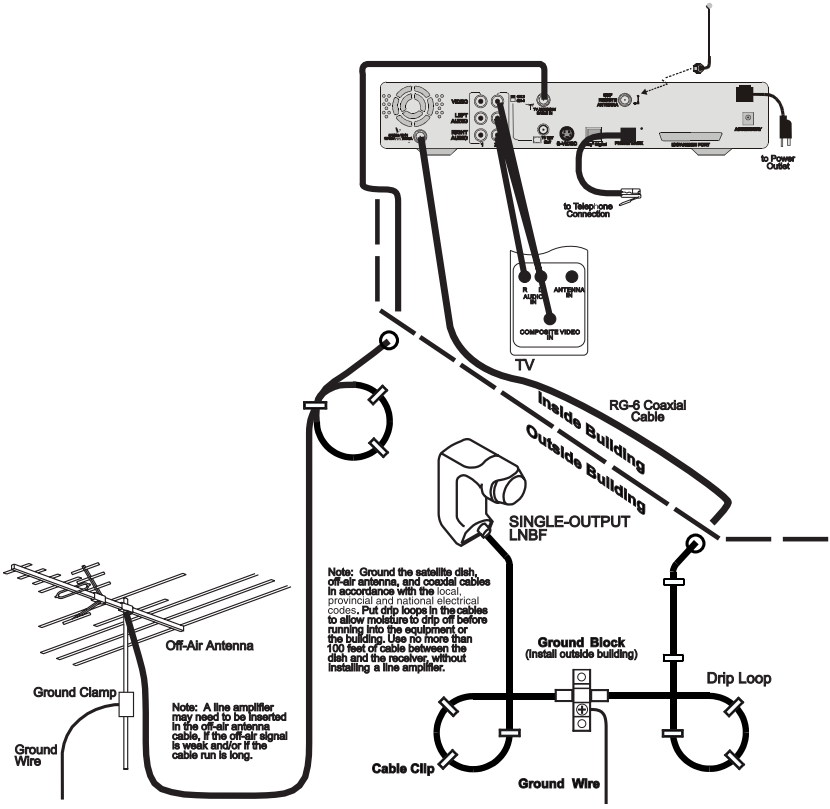
Preview the setups to determine the one that most closely matches your equipment, and then use that setup as the basis for your wiring installation.

Your Bell ExpressVu receiver must be connected to a phone line at all times to order Bell ExpressVu PPV programs using the receiver.

WIRING SETUP DIAGRAMS

These *Installation Instructions* provide *only* the basic wiring setup diagram below. For more wiring setup diagrams, see the *User Guide* that came with the Bell ExpressVu system.

Note: The off-air television antenna shown in the following diagram is optional.



ASSEMBLE THE SATELLITE ANTENNA

What is Happening	Possible Reasons Why	What to Do
The support arm and bracket are separate pieces.	Some models of the support arm/bracket require assembly.	Assemble the support arm and bracket.
You want your system to support two receivers, but you have only a single output LNBF.	You *must* have a dual output LNBF to support two receivers. You must also run a separate coaxial cable from each LNBF output to each receiver. This is a feature of satellite TV in general, not just the Bell ExpressVu system.	Contact your dealer to order a dual LNBF.

FINE-TUNE THE AIM OF THE SATELLITE ANTENNA

What is Happening	Possible Reasons Why	What to Do
The **Signal Strength** bar indicates a signal strength, but is red and displays the word "Unlocked."	The satellite antenna may be aimed at the Bell ExpressVu satellite, but without a signal strength sufficient to display a TV picture.	Adjust the aim of the antenna slowly until the **Signal Strength** bar turns *green* and displays the word "Locked."
The **Signal Strength** bar is green, but you cannot fine-tune the antenna aim for a 100% signal strength.	The signal strength is not intended to reach 100%	If your system provides you an acceptable picture, you do not need to do anything. You should optimize signal strength. If you cannot reach 55% signal strength on transponder 1 you may wish to purchase a larger dish antenna.
No matter what you try, you cannot get the **Signal Strength** bar *green*.	Cable connectors may have loosened or have moisture inside. There may be blockage with the satellite signal.	Make sure nothing (including your own body) is blocking the signal path from the satellite to the antenna. Confirm that all cable connectors are firmly connected and dry. Call the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH for assistance.
You see the error message, "Attempting to acquire satellite signal."	The receiver may have just been plugged in, and is acquiring the satellite signal. The satellite antenna may have been moved out of alignment with the satellite signal. Connecting cables may have loosened or have moisture inside.There may be interference with the satellite signal. Your dish may be full of snow or debris.	Wait to see if the message is removed. Confirm that the **Signal Strength** bar is green and displays the word "Locked ExpressVu." If not, re-aim the satellite antenna. Confirm that all cables are firmly connected and dry. Call the Bell ExpressVu Customer Service Call Centre at 1-888-SKY-DISH for assistance. Clean off the dish.