

## Do It Yourself Guide

# INSIDE TELEPHONE WIRING

As of June 1, 2008, if you are a single line residential customer living in a single line dwelling or an apartment that is not a building that is a 4-plex or larger, you are responsible for the installation and maintenance of telephone wiring inside your residence.

If your service terminates on a hard-wired telephone set, Tbaytel will continue to repair your inside wiring as part of your basic service until a Network Interface Device (NID) is installed.

This Do It Yourself Guide to Inside Telephone Wiring will assist you in performing any inside wiring activities yourself. You may also hire an external contractor or use the services of a Tbaytel technician.

### Procedure to Install Inside Telephone Wiring

#### Inside / Outside

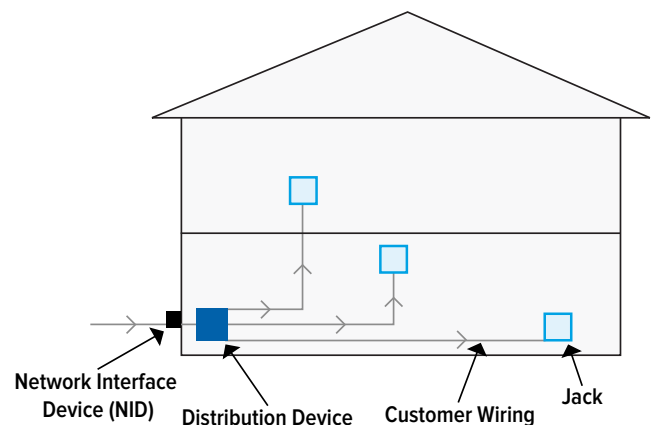
Tbaytel installs and maintains the telephone wiring leading up to your home, apartment or condominium up to and including a NID which is located on the outside wall of your premises usually next to the incoming Hydro service.

When a new residence is constructed, Tbaytel installs all outside wiring, aerial or underground, to the NID located on the outside of a house. Tbaytel will also provide Cat 5 wiring to a Distribution Device. The Distribution Device separates Tbaytel's network from the inside wiring in your dwelling.

In a single family residence the Distribution Device is located inside your house (normally close to the electrical panel).

The installation of all wiring from the Distribution Device to connecting jacks, is the owner's responsibility.

Tbaytel will install this wiring at competitive rates. You have the option of hiring a qualified contractor or doing the work yourself.



#### IMPORTANT ADVICE

- The Canadian Standards Association (CSA) must approve telephone wiring and jacks. For safety and reliability, look for the CSA symbol on any telephone wire or jacks you use.
- The voltages present on telephone wires are not normally hazardous, but you should be careful if you are working close to electrical power circuits or other hazards. If telephone wiring comes into contact with electrical circuits, telephone wires could conduct dangerous shocks.
- Follow Ontario and local building code and bylaws.
- Follow Canadian and Ontario Electrical Code.
- Follow manufacturer instructions, which accompany the materials and parts.
- Correct any service difficulty that you create, which harms the telecommunications system.
- Service charges will apply when Tbaytel makes a repair call to your premises in order to remedy problems resulting from customer installed wiring that has been improperly installed or maintained.

## IMPORTANT ADVICE (CONTINUED)

- When installing or maintaining customer installed wiring, the customer assumes risks such as loss of service, damage to property and personal injury.
- Tbaytel accepts no responsibility whatsoever for any personal injury, property damage or any other damages, whether direct, incidental or consequential, which may be caused by use of these instructions by you or by anyone other than an authorized Tbaytel employee.

## Planning Your Installation

1. Determine your needs for now and the future. This will affect your choice of wire.
2. Select locations to suit your present and future needs. Tbaytel recommends a minimum of one jack in each of the following locations: bedrooms, kitchen, dining room, family room, living room and home office.  
  
It is not necessary to have a phone connected at each pre-wired location; however, by preplanning you can reduce the cost of future jack locations, unsightly surface wiring and additional labour costs on future changes.

### TIP

Four pair Category 5 wire is the standard wire recommended by Tbaytel for single line residential installations.

For future services such as high speed data, video and home based business, Tbaytel recommends you consider installing 4 pair wiring to each jack location planned at this time.

3. Plan cable routes to avoid possible damage from future construction, rubbing, overheating, dampness, or contact with power lines. The Canadian Electrical Code Part 1 Section 60, requires a minimum of 50mm (2 inches) separation from power cables unless armored or in conduit. The route should follow a supported path through the floor joists, over ceilings, through the wall studs, and behind baseboards. The route should conceal the wiring. A separate cable is to be installed to each jack location from the Distribution Point.
4. The Canadian Electrical Code Part 1 Section 60 item 60-400 for communication in washroom states:  
  
“Communication equipment located in a bathroom shall be permanently fixed on the wall, and shall be located so that no part may be reached or used from the bath or shower enclosure.”
5. Telecommunications wiring installed near pools and other hazardous locations shall conform to Canadian Electrical Code Part 1.
6. Start a new run of wire for each jack, beginning at the Distribution Point or if telephone service has never been installed at your location, at a point close to the electrical panel where Tbaytel will install the Distribution Point.
7. Install standard single electrical outlet boxes where you want telephone jacks. Attach each box to a stud inside the wall at the same level as a normal electrical outlet or, for a wall-mounted phone, at same level as a light switch. Handicapped premises should have wall phones at levels specified by Ontario Building Code Section 3 item 3.7.3.14.

Leave at least 1 metre (3 feet) of excess wire at the Distribution Point. Leave 30 centimetres (12 inches) of wire coiled up inside each outlet box where you install a jack.

Note: Tbaytel will install a connection cord from the Distribution Device to the NID.

## Wiring Methods

There are **two** basic methods of installing telephone wiring:

### Concealed Wiring:

Concealed wiring inside walls of a building is installed during construction or renovation, is the preferred method. As well as being esthetically pleasing, wiring inside walls has a greater protection from possible damage.

## Wiring Methods (continued)

### Visible Wiring:

Visible wiring is the method normally used in existing residences or businesses where the walls and floors are already finished. This wiring usually runs along the baseboard and up the side of stairways or other interior parts of a finished structure.

1. Avoid installing wire around door jams or through windows. To pass the wire through a doorway, drill a hole near the floor beside the door and run wire through.
2. Always leave 1 metre (3 feet) of slack at the Distribution Point and 30 centimetres (12 inches) at the outlet box.
3. Avoid installing wire in damp or wet areas such as bathrooms, along basement floors, and outside walls.
4. Do not wrap wire around nails, hooks or other sharp objects.
5. Modular jacks are either “surface” or “flush” mounted type.
6. These jacks can be mounted on the surface for exposed wiring, over a small hole when wire is in the wall, or when an outlet box is used.
7. Verify the Distribution Device location with Tbaytel if you are unsure of its location.

### TIP

- Always start at the point where you intend to install a telephone jack.
- Be careful not to drive staples or clips through the wire. If this occurs, discard the entire section of wire and start again.
- Do not run wire along the floor or under carpets. Activity such as walking could cause damage to the wire and cause it to break.
- Do not run wire inside or near heating ducts.

## Trouble Shooting and Repairs

If there is no dial tone, or if there is noise on the line, you should take the following steps:

Make sure that your problem is not due to a defective telephone set. Try another telephone set to double check.

1. Locate your Distribution Point at the electrical panel in your residence. Unplug the customer phone line and plug in a working phone. If you hear dial tone, the problem is with your inside wiring. If there is no dial tone **call Tbaytel repair service at 611**.
2. The Tbaytel repair representative will provide further help in determining whether the trouble is caused by your inside wiring. Check that all connections have been made properly. Are all of the coloured wires connected to the right terminals? Is the exposed copper wire making a solid contact with the right terminals?
3. Check the wire. Is it broken or split? Does a staple, nail, screw or other object pierce it?
4. Check that the pins or connecting terminals inside jacks are not touching each other and that the jack itself is not damaged.

### Listening for Troubles:

You can determine a lot about the trouble you are experiencing by listening to the sounds you hear on your telephone line.

#### Static:

The wire could be wet or pierced. Connections could be loose at a connecting point. Check the wire carefully as well as all connections.

#### Buzzing:

The wire may have come in contact with metal or other connection terminals. It could also be touching the outlet box or other metal around the jack. Check that colours have been matched correctly.

#### Dead Air:

There is contact between exposed copper from wires of different colours.

Tbaytel provides installation and repair of outside wire as part of basic telephone service.

If you need a qualified Tbaytel technician to go to your location for installation or repair of inside wire, there may be a charge for labour and materials if damage is not due to normal wear and tear.

## Waiver of Responsibility

Tbaytel shall not be liable to the user or any other person, for the damages or loss of any kind or nature, injury or death resulting from users' or any other persons' unfamiliarity with the Canadian Electrical Code, Ontario Building Code, Local By-laws, or any other law or regulation applicable to residence wiring, or reliance of any other person on instruction in this guide.

Any rewiring by the user or any other person pursuant to this guide is entirely at user's risk.

## Industry Standards:

1. City of Thunder Bay Building Bylaws
2. Ontario Building Code
3. National Building Code of Canada
4. CAN/CSA T-529 Design Guidelines for Telecommunications Wiring Systems
5. CAN/CSA T-528 Residential Guidelines for Administration Infrastructure in Commercial Buildings
6. CAN/CSA T-525-94 Residential Wiring for Telecommunications
7. Canadian Electrical Code Part 1, 2, 3
8. CRTC Canadian Radio, Television and Telecommunications Commission Rulings
9. CAN/CSA T-530-M90 Building Design Guidelines for Telecommunications
10. CAN/CSA C22.2 No. 182.4 M Plugs Receptacles Connectors for Communication Systems
11. Ontario Electrical Safety Code 23rd Edition

Tbaytel is here to support you with all of your telephone needs. If we can be of assistance, please contact Tbaytel Customer Care at **623-4400**.

[www.tbaytel.net/wirecare](http://www.tbaytel.net/wirecare)  
**623-4400**