

User's Manual



hantel

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FCC RF EXPOSURE INFORMATION

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Highlights

Congratulations on your purchase of the Fixed Wireless Terminal that has been designed to operate on the latest digital mobile communications technology, Code Division Multiple Access(CDMA). This CDMA digital technology has greatly enhanced voice clarity and can provide various advanced features. The terminal enables the normal operation and direct connection of standard telephone equipment into the cellular network. The standard unit provides:

- This Model looks perfect on your desk in the office. It can also be installed on any wall in your office or home thanks to the wall-mount kit that comes with the unit.
- This Model owners can easily adjust the volume of the handset with the volume control, and set the volume at an optimal level.
- This Model has a practical and elegant design. It can be used at office or home. This Model also offers many useful features and technological advantages.
- This Model has Versatile Installation Options
- This Model offers its users superior voice quality through its use of QCELP EVRC Vocoder.
- Various sounds and LED functions provide audio and visual alerts for Low Battery, Air Link Cut-Off and Incorrect Use.
- The owner can control who can access, and use the terminal with the Outgoing Lock function.
- Connect This Model with your PC for data transmission and PC FAX communication.
- Simple and quick transmission of the stored numbers in the phone book with One-Touch and Two-Touch Dial.
- The Emergency Call Hold function enables a user to contact emergency center personnel.
- The Hotline Call function allows the most frequently used numbers to be automatically connected when a user picks up the handset.
- The Voice Privacy function ensures against illegal phone tapping can be prevented.
- The Authentication Key function prevents the owner's phone numbers from being cloned by others.
- CID function lets you know who is calling you.
- This Model user interface menu driver is easy to use.
- G3 Fax (Optional) service is supported for analog environment.
- The Pay Phone Interface allows This Model to work as a payphone.

This Model provides:

- AC Power supply with barrel plug connector
- Support Dial tone
- Touch tone (DTMF) or Pulse Dialing
- A phone jack to plug in the telephone equipment
- Support Caller ID Telephone
- Ring voltage used to ring the telephone connected to the unit, with a REN (Ringer Equivalence Numbers) of 4
- A phone jack to plug in the G3 FAX equipment
- Data Port for service and repair(RS-232 data cable, optional)
- Voice-Mail Notification ring alerts you to new voice-mail messages
- Dipole Antenna

Some features can not be supported by service provider's system status.

For instance, the following features may not be supported ;

- Emergency Call
- Hot Line Call
- Speed Dial
- Alarm
- Outgoing Call Lock

1. Before You Start

1.1 Safety precautions

Warning

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture. Do not use this product near swimming pools or other bodies of water. Telephones with multiple terminating impedance should be set for 600ohms.

Important

Before installing or operating this product, read this information.

1.2 Optimal Phone Performance

- Do not use the unit with a damaged antenna. Have your antenna replaced by a qualified technician immediately. Use only a manufacturer-approved antenna. Non-approved antennas, modifications, or attachments could impair call quality,damage the phone.
- For the best call quality, keep the antenna free from obstructions and point the antenna straight up.
- Do not operate your product when holding the antenna, or when someone is within four inches (ten centimeters) of the antenna. Holding the antenna affects call quality and may cause the telephone to operate at a higher power level than needed.
- RF energy may affect improperly installed or inadequately shielded personal medical devices such as pace markers, hospital monitor. Consult the manufacturer of any personal medical devices to determine if they are adequately shielded from external RF energy.
- Turn your terminal OFF in health care facilities when any regulations posted in the areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.
- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna
 - Increase the separation between the radio or television and the telephone.
 - Connect the equipment into an outlet on a circuit different from that to which the terminal is connected.
 - Consult you Authorized Dealer of an experienced Radio/TV technician for help.

- Use only the battery, antenna and AC power supply provided by Authorized Dealer. Using any other type will invalidate the warranty.
- Only authorized personnel should service the phone and its accessories. Faulty installation or service may be dangerous and invalidate the warranty.
- Do not use the unit in designated no cellular phone use area.
- Avoid exposure to high temperature or humidity
- Avoid wetting the unit with any liquids. If the unit gets wet, turn the power off immediately and remove the backup battery and AC power supply. If the unit is inoperable, then return to the service agent for service.
- Avoid shock or impact.
- We recommend you charge the backup battery before initial use. Backup battery maybe discharged during delivery.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - This device may not cause harmful interference, and
 - this device must accept any interference received, including interference that may cause undesired operation.

1.3 Care and Service

- If the unit fails for any reason, do not attempt to disassemble; contact the telephone service provider for assistance.
- Unplug the Telephone from the wall outlet and remove antenna (or disconnect antenna cable) before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- If any of the following conditions exist: Unplug the unit at the wall plug, remove battery, and call the service provider.
 - The unit has been exposed to rain or water.
 - Liquid has been spilled into the unit.
 - The power supply cord is damaged or frayed.
 - The unit has been dropped or damaged.
 - The unit does not work normally by following the operating instructions.

NOTE :

- Don't disassemble or modify this product deliberately.
- Use only an approved adapter.
- Don't touch adapter with wet hands.
- Don't install this product in dusty area.
- Avoid areas near sunlight, heating apparatus, vibration

- This product is designed for being used within commercial power. In other voltage area, please install voltage stability device and use it.
- When struck by lightning, unplug to protect terminal from lightning damage and fire.
- Don't install this product near other electronic appliance.
- When installing battery, be careful of polarity.
- Install in indication of green signal.
- When used in wall, set up terminal type near it.

2. Getting started and Installation

2.1 Checking The Parts

Please make sure that these components are present before you begin the unit installation. And then compare the following figures and components. If components are missing or damage is found, contact the store where you purchased the unit immediately.



1. WLL Terminal



2. AC/DC Adapter



3. Antenna



4. User's Manual

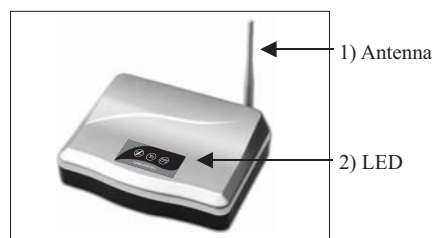


5. Back-up Battery

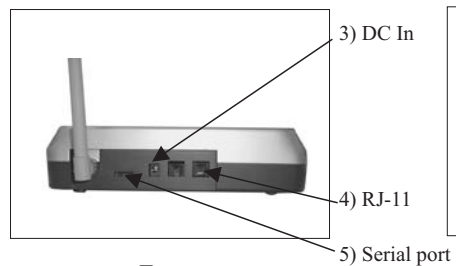


6. Data Cable - RS-232
(Optional)

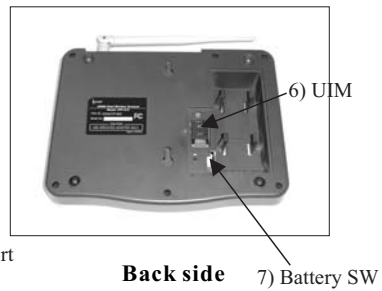
2.2 Know your Terminal



Top (LED type)



Front



Back side

1. Antenna : Connector Connecting Port for TNC Antenna

2. LEDs : Indicate the status of the unit
- LED indications are described in the following table

Name	LED Color	Activity	Meaning
Power /Battery	GREEN	On	LED lights in GREEN indicates the external power is supplied. Power is being supplied by AC adapter
	RED	On	Indicates the status of backup battery. The terminal can be operated if the backup battery is connected, even though the external power supply is cut off. Battery is fully charged or supplying power.
	—	Off	No Power/Power is being supplied by battery
	RED	Flashing	Low Battery Warning.
RSSI	GREEN	On	Indicates the RF Signal Strength in your area. For better signal strength, please perform signal strength test to find the best operating location. Best/ Good service condition.
	RED	On	Voice through the line is not clear but a call is available.
	RED	Flashing	Voice through the line is not clear and a call is non-available.
	—	Off	No service condition.
MSG	GREEN	On	You have voice mail message. Contact your service provider to activate message service.
	RED	Flashing	Incoming voice call.
	GREEN	Flashing	Data service or G3 FAX call.
	—	Off	Normal operation without any voice mail message or call.

* LED Display are to change without notice.

3. DC IN : 12V AC/DC Power Adapter. The SMPS supplies the power to the WLL terminal.

4. TEL/FAX (RJ-11 port) : Connecting Ports for G3 FAX Machine or SLT(Single Line Telephone)

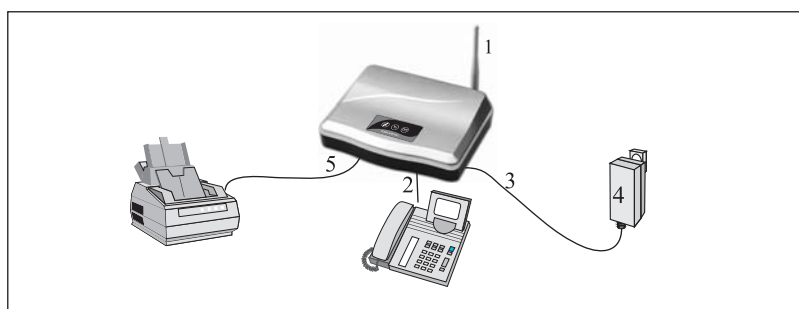
5. Serial port(RS-232 data cable) : The Serial Port used to connect the terminal to the PC for maintenance/repair, and data communication.

6. UIM Connector : Refer to 4.11 R-UIM

7. Battery Switch : If you use to Battery, you should be Battery Switch on.
Battery is charged only when battery switch is on.

2.3 Setting up your terminal

This Model operates by receiving electricity form an electrical outlet or internal battery.



- 1.Connect the terminal mounted antenna on the side of the terminal.
- 2.Connect a conventional wired telephone to a RJ-11 phone port.
- 3.Plug the AC adapter output onto the rear DC 12V jack of the Terminal.
- 4.Plug the AC adapter plug into an appropriate electrical outlet.
- 5.Connect a G3 analog facsimile machine to a dedicated RJ-11 port.

2.3.1 Adjust Your WLL

- 1.Pick up the phone receiver and listen to dial tone.
- 2.If you hear dial tone, make a call.
- 3.If ether static or echo is heard While you're talking with the other party move the antenna until you find the spot where voice conversation is strong, and static and echo are minimized

NOTE:

If you are unsuccessful in dialing out, verify the following:

- The antenna location needs to be adjusted.
- The NAM/Phone Numbers needs to be set up.
- Your WLL phone numbers has not been activated contact your service provider

2.3.2 Adding More Phones

Plug in an RJ-11 line splitter(not supplied) to connect additional phones to your WLL.

NOTE: you can only make one phone call at a time.

2.3.3 Additional Telephone Equipment

If you plan to use a device other than a telephone with your WLL, make sure that device will work with a normal wired telephone line.

FAX Machines Connect a fax machine with the same way it needs to be set up for use on a regular wired telephone line.

PBX Systems PABX installation should only be performed by experienced telephone technicians.

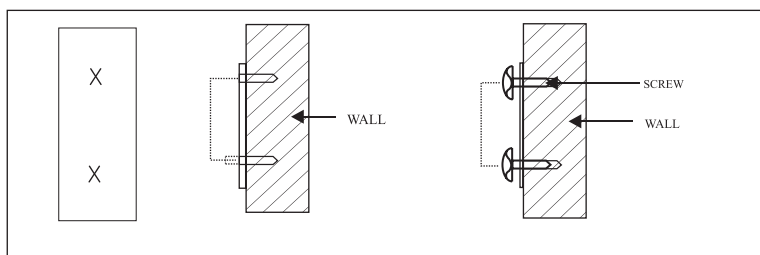
2.4 Install of Desktop

Installing your WLL Terminal on a desktop is very easy. Simply place the WLL Terminal on the desktop(or any flat, desk, table, stable horizontal surface, etc.). Avoid direct exposure to the sun lights and damp area. Read the Information located at the first part of this document before you place the terminal.

2.5 Install of Wall Mounting

Before finalizing the precise location of the phone, please perform the signal strength test to ensure the best operating condition location for the assembled unit.

- For installing the unit into a concrete wall, attach the installation sheet onto a concrete wall and make holes with a drill at the marked location. When installing mounting screws, do not screw them in all the way. Leave space between the screw head and the installation sheet.



- Assemble the Wall-Bracket by using 2 Places slots on the bottom of the phone, and then hook up holes of the Wall-Bracket to the screw head.



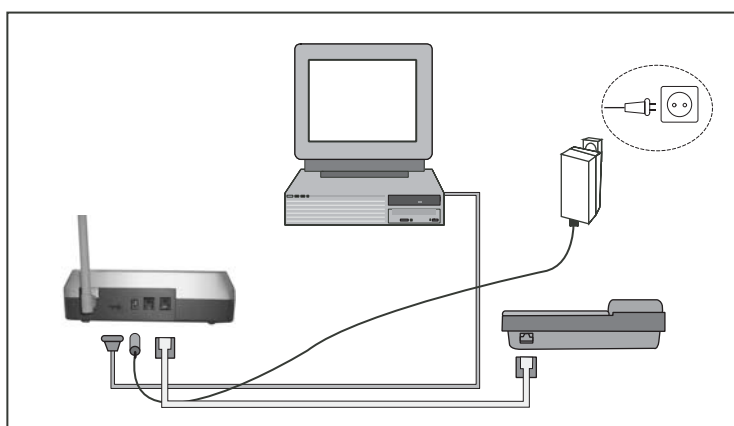
2.6 How to install battery



1. Open battery cover on the bottom side of the WLL.
2. Connect the battery DC power connector/cable to WLL.
3. Inset the battery pack in the right position between the hold bars.
4. Close the battery cover.

2.7 Installation For the Data Service

As shown below, connect a RS-232 data cable to the Serial Port of the terminal and COM1 (or COM2) of PC. RS-232 data cable is available from the service provider.



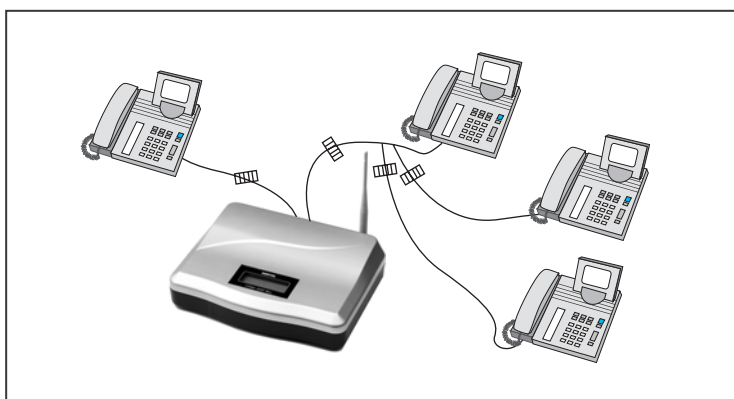
2.8 Indications

1. Sound indications are described in following table

Type	Status	Meaning
Normal dial tone	20 sec on ; 300 msec off	The WLL is in-service with adequate receive signal. So Indicates that call service is available.
No Service tone	1.5sec on ; 800 msec off	WLL is not capable of making or receiving calls.
Outgoing call restriction tone	800 msec on ; 200 msec off	WLL is not capable of Making calls but is capable of receiving calls.
Voice mail tone	Three time (100 msec on ; 100 msec off)	You have voice mail message.

2.9 Multi-extension Installations

This Model has 2 jacks. You can connect up to 4 phones to the terminal using RJ-11 jack. A user must buy additional parts to extend the connection. For multi-extension Installations, make sure that all the extensions are on-hook. If one extension is off-hook (not hung up), none of the extensions on that line will ring when a call is being received.



3. Basic Functions

3.1 Power On/Off

1. The power jack on the side of the WLL. The POWER LED indicates the presents status;
2. When the terminal is succeeded in getting the service, RSSI LED indicates the strength of the signal. Lifting handset on telephone, dial tone is heard and you can enter phone number.

NOTE:

- When you turn on the WLL, it will automatically search for service signal.
When it successfully acquires service state, it will generate a dial tone on the handset.
- Not entering any key for 15 seconds warning tone will be produced.
- In the overlap dial mode, it may take over 15 seconds.
- If Hot Line function is enabled, busy tone is not produced and hot line number is automatically connected.

3. If the radio service is not available or radio signal is too weak to detect;
The RSSI LED is Red. (No Service status)

3.2 Making Calls

1. First check to see that your WLL Phone is turned on.
2. Pick up the handset. You will hear a dial tone.
3. Using the number keypad, dial the desired telephone numbers.

NOTE :

- When you finish entering phone number, the call will be connected immediately after 5 seconds. Please Refer to 4.9 Auto dial time.
- 4. When the other person answers, begin your conversation.
- 5. To end the call, replace the handset.

NOTE :

- You can dial by 32 digit including <*(▲)> or <#(▼)>
- You can dial emergency call by pressing and holding <*(▲)> without inputting any digits. You can't change the emergency call number.

NOTE : Dial Tone

Dial tone will be generated if you lift your handset until you press any key.
This Model will not generate any dial tone in NO Service status

3.3 Receiving Calls

The terminal signals the telephone(s) to ring when an incoming call is detected.
Pick up the telephone handset and begin talking into the microphone on the handset.

NOTE :

- Be sure the phone's ringer is enabled.
- If you heard incoming call in picking up the handset, you can receive the call by pressing any key.

3.4 Ending a Calls

When you have completed the call, place the handset back on telephone. Also you can hook flash more than about 1 second to end a call and place a new call without hanging up the handset.

4. Advanced Functions**4.1 One Minute Alert Beep**

A discrete tone is generated after each minute interval into the call conversation to notify you that a minute has passed since the beginning of the call or after the previous time of discrete tone, regardless of when you make or receive a call.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <1>.
3. Press <*(▲)> to set 1 minute alert beep.
Press <#(▼)> to release 1 minute alert beep.

4.2 Alarm**4.2.1 12Hour Mode**

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)>, <2> and <1(12Hour mode)>, <1(AM mode)> or <2(PM mode)>.
3. Press alarm time(00:00~11:59).
4. Press <*(▲)> to set alarm.

4.2.2 24hour Mode

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)>, <2> and <2(24Hour mode)>.
3. Press alarm time(00:00~23:59).
4. Press <*(▲)> to set alarm.

4.2.3 Release Alarm Setting

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)>, <2> and <#(▼)>.

NOTE : When you will hear the alarm sound, pick up the handset to turn off alarm.

4.3 Connecting tone

A discrete tone is generated when a call is connected successfully.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <3>.
3. Press <*(▲)> to set connection tone.
Press <#(▼)> to release connection tone.

4.4 Ear-piece Voice volume

You can control the Ear-piece volume on your phone.

1. Pick up the handset (Idle status).
2. Press <*(▲)>, <*(▲)> and <4>.
3. Press <*(▲)> or <#(▼)> for up or down (4 Step).
4. Press <0> for save.

4.5 CID mode

If your phone connected to the WLL is caller ID enabled, you can set the WLL to display the caller number or name on the phone.
The default setting of caller ID is DTMF type.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <5>.
3. Press <*(▲)> for DTMF type phone or Press <#(▼)> for Bellcore type phone.
4. Press <0> to release caller ID setting.

NOTE : Caller ID is a feature, which notifies you who is calling by displaying the caller's number on the telephone's LCD when an incoming call comes through.
This feature is available only with a telephone that has an LCD display on it.
Contact your service provider to activate or deactivate Caller ID.

4.6 Outgoing Calls Lock

If you try to make an outgoing call while outgoing call lock is enabled, then you will hear warning tone after dial time-out as a indication of entering the LOCK code.
You should enter LOCK code to make an outgoing call. LOCK code is composed of 4 digits and the initial setting is "0000". Outgoing Call Lock feature is disabled as a factory setting

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <6>.
3. Press 4 digits Lock Code Number. (The default lock code is preset to 0000 at the factory.)

NOTE : If the code is correct, it sounds confirmation beep.

If not, it returns to the stand by mode with error beep.

4. Press <*(▲)> to set outgoing call restrict or Press <#(▼)> to release outgoing call restrict.

NOTE : If someone tries to make a call when outgoing call restriction is set, it sounds outgoing call restriction tone and howler tone.

4.7 Lock code

Used when you wish to change the lock code of the terminal. The programmed lock code prevents the terminal from being operational to any other people without your permission. This feature can be disabled and enabled through simple keypad number code entry. When you first buy the phone, the lock number is 0000.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <7>.
3. Press 4 digits Lock Code Number (The default lock code is preset to 0000 at the factory).

NOTE : If the code is correct, it will confirm with a tone.

If the code is incorrect, it returns to the standby mode with error beep.

4. Press 4 digits new Lock Code Number. It sounds confirmation beep.
5. Press 4 digits new Lock Code Number again. If it is different from the new Lock code you entered in the beginning, it returns to the standby mode with error tone.
6. Press <*(▲)> to store new Lock Code. If you press other key, it returns to the standby mode with error tone.

NOTE : If it is correct, it sounds confirmation beep.

4.8 Reset

Reset the terminal back to the initial service status of factory pre-programmed state. This feature can be disabled and enabled through simple keypad number code entry.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <10>.
3. Press 4 digits Lock Code Number. (The default lock code is preset to 0000 at the factory.)

NOTE : If the code is correct, it will confirm with a tone.
If not, it returns to the stand by mode with error beep.

4. Press <*(▲)>.
5. Wait until you hear confirmation tone.

4.9 Auto Dial time

You can set Auto Dial time(0sec ~ 9sec) on your phone. Default setting is 5sec.

1. Pick up the handset.
2. Press <*(▲)>, <*(▲)> and <11>.
3. Press Auto dial time(0~9).
4. Press <*(▲)>.
5. Wait until you hear confirmation tone.

4.10 Data service

Using RS-232 Data Cable , you can connect this model to PC for Internet, if your service provider provides Wireless Data Communication Service.

1. In case DS(Data Service) mode
- Press "36*#102*" to DS mode
2. In case DM(Diag. Monitor) mode
- Press "36*#101*" to DM mode

4.10.1 Setting a Standard Modem in PC

The phone is set as DS mode by default. If you want to confirm this, Refer to 4.10 users must designate a proper standard modem to a proper serial port (COM port) of their computers.

- Click Start, point to Settings, and then click Control Panel.
- Double-Click Modem
- When Modem Properties appears, click Add.
- Check the box next to where it says, "Don't detect my modem, I will select it from a list" and then click Next.
- Select Standard Modem Types under manufacturers and select 33,600bps Standard Modem under Models columns. Click Next.
- Select a proper serial port in your computer and click Next.
- Click Finish when a message appears that says "Your modem has been set up successfully."
- Click Start, point to Settings, and then click Control Panel. Double-click Modem and click Properties.
- Make sure that the modem is installed properly including serial port number and data speed. If not, make correction.

NOTE: Maximum Speed type has many kinds. We recommend 115,200bps.

And Port is properly serial port for your PC.

- Select Connection tab and click Advanced. Type in "at+crm=1" under Extra Settings. (0 is a default value. This value could vary with service operators.)

NOTE: Extra setting is at +crm. This command value is 3 type

"at+crm=0", "at+crm=1", "at+crm=2"

We recommend "at+crm=1"

Now you're ready to make data calls using this FWT.

4.10.2 Browsing the Internet

1) Setting s Dial-Up Networking

- Double-click My Computer -> Double-click Dial-Up Networking
- > Double-click Make New Connection.
- Click next
- Check second radio button and Click next
- Check third radio button and Click next
- Check first radio button and Click next
- Enter the telephone number, the designated number of your operator or ISP (ex #777) . Click Next.
- Enter User Name and password. Click Next.

NOTE: User name and password will be provided by your operator or ISP.

For Instance " CARD " and blank can be used for user name and password respectively in china.

- Click next
- Select No and Click next
- Uncheck the check button and Click Finish.
- Double-Click My Computer -> Double-Click Dial-Up Networking folder.

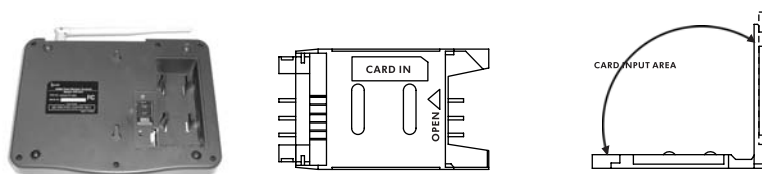
You will see a new icon. Now you're ready to access the internet using this FWT.

2) Connecting to the Internet

- Connect your computer to this FWT using data cable.
- Double click the Internet icon in the Dial-up Networking folder.
- Click Connect.
- When connected, run the internet browser.

4.11 R-UIM

The removable user identity module (R-UIM) Specification is TIA/EIA/IS-820 and R-UIM Addendum1 is TIA/EIA/IS-820-1.



1. Open UIM cover on the bottom side of the WLL.
2. Connect the UIM Card connector to WLL.
3. Close the UIM cover.

NOTE : Turn off the phone whenever you insert or remove UIM card.

4.12 Authentication Function

The Authentication Key function prevents the owner's phone number from being cloned by others. The phone has its own authentication key function. This will prohibit any illegal use of the phone. Your service provider will need to register your phone using this authentication function

5. Supplementary Functions

5.1 Call Functions

5.1.1 Speed Dial

This Model will store up to 99 phone numbers using 2 digit addresses (01-99). The stored number in the Phonebook allows a call to be placed by pressing the two digit address. This Mode has the ability to search and edit numbers stored in the Phonebook.

1) Speed Dial Function On / Off

You can set the Speed Dial function by entering the following functions.

1. Press "36*#11*" to Speed Dial On
2. Press "36*#12*" to Speed Dial Off

2) Making a Call Using the Speed Dialing Function

- Make sure the Speed Dial Function is "on" and find the memory station number in the Phonebook.
- If the saved address is a single digit, between 1 and 9, pick up the handset and press the number and hold it down, or press the number briefly and click the Hook Flash, then the call will be made.
- If the saved address is two digits, pick up the handset and press the first digit and then press the second digit and hold it down or press both digit briefly and click the Hook-flash then a call is made.

Note : If you attempt a Speed Dialing while the Speed Dial Function is OFF, an error tone will sound to indicate wrong operation.

5.1.2 Redialing

Used to call to the phone number called latest.

1. Pick up the handset and long push (Dig down) to *button. The line is connected to the number called latest. This function would not work if you tried no call after power on.
2. Speak to the called party when the line is connected. And Hang up the handset after conversation.

5.1.3 Emergency Call

When emergency call number is connected once, it will not be terminated unless the called party disconnects the call (Emergency Call Hold Service).

Therefore even caller hangs up the telephone, the line will be still connected, so if the caller picks up the telephone again, he can continue talking.

If emergency call is connected, cellular service is not supported.

As long as your telephone is registered on a system, you can place a call to emergency number even if your telephone is locked* or restricted*.

Please check the available emergency call number with your service provider.

The Emergency Call Hold function operates only when the phone numbers are saved at address number 01~03 in Phone book, and when the Emergency Call Hold function is turned on.

1. Press "36*#21*" to Emergency Call Hold On
2. Press "36*#22*" to Emergency Call Hold Off

5.1.4 Hot Line

1. The Hot Line function is used to make an automatic, quick call to a designated number without dialing. Just pick up the handset, then a call will be made.
2. The Hot Line number should be registered at address 99 in the Phone book.
Hotline operates in 2 modes;
 - Timed Hot Line; The call will be made in delayed manner between 4-8 seconds (sending waiting time), depending on your default value, after you pick up the handset. Original default value is 6 seconds.
 - Immediate Hot Line; The call will be made as soon as you pick up the handset.
3. The Hotline function overrides any other functions.

1) Hot Line function On / Off

1. Press "36*#31*" to Timed Hot Line On
2. Press "36*#32*" to Immediate Hot Line On
3. Press "36*#33*" to Hot Line Off

2) Making a Hot Line Call

When a phone number is saved in address [99], and the Hot Line function is set to the Timed Hot Line mode, a call is automatically made, and if the send waiting time (4 ~ 8 seconds) elapses, if the handset is lifted. .

If the Hot Line function is set to the Immediate Hot Line mode, and you pick up the handset, the call is made automatically to the number saved in the memory address [99].

Note : If the Hot Line function is in the Immediate Hot Line mode, a call may not be made to another number. In this case, to make a call to another number, change the setup mode. Pick up the handset and press <#> within 1 second and go to the setup mode, and deactivate the Hot Line function.

5.2 Pay Phone Interface

This terminal supports the Metering Pulse and the Polarity Reverse for the PCO Interface. If the Metering Pulse is required for the PCO Interface, 2 kinds of frequencies (16KHz, 12KHz) can be supported. (Depend on system)

1. Press "36*#41*" to pay phone Interface on mode.
2. Press "36*#42*" to pay phone Interface off mode.

5.3 Phone Book

5.3.1 Storing Phone Numbers

1. Pick up the telephone handset and Press "36*#51"
2. Press the 2 digit address you would like to store the phone number.
Suppose the address is <4>, press [04].
3. Press the phone numbers to be saved digit by digit .
4. When you press <*(▲)> button (saving), you will hear a <confirmation beep> indicating the number has been successfully stored.

5.3.2 Deleting Phone Numbers

1) Deleting a Number

1. Pick up the telephone handset and Press "36*#52"
2. Press the 2 digit address to be deleted.
3. When you press <*(▲)>button (saving), you will hear a <confirmation beep> indicating the number has been successfully deleted.

2) Deleting All Numbers

1. Pick up the telephone handset and Press "36*#53"
2. When you press <*(▲)> button (saving), you will hear a <confirmation sound> indicating all stored numbers have been successfully deleted.

5.4 Voice Privacy

This terminal is equipped with voice privacy function to prevent illegal tapping. There are two detailed settings available, <Standard> for regular level voice privacy mode and <Enhanced> for reinforced voice privacy mode.

1. Press "36*#6".
2. Press <1> button for < Enhanced Voice Privacy > mode or <2> button for < Standard Voice Privacy > mode.
3. Press <*(▲)> button to save the setting .

5.5 Ringer Frequency & Cadence Control

This function is used to control the ringer frequency and cadence. Select the frequency first and then select the cadence. Default setting is 20Hz, 1 sec On 2sec Off.

5.5.1 Ringer Frequency Setting

1. Press "36*#7".
2. Select a desired number from 1(16Hz) , 2(20Hz), 3(25Hz).
3. Press <*(▲)> button to save the setting .
[Example] If you want to 16Hz, Press 36*#71*

5.5.2 Ringer Cadence Setting

1. After selecting the frequency, select the cadence. Select a desired number from 1~ 6 to terminate ringer frequency and ringer cadence setting.
2. Press 36*#8.
3. Select a desired number from 1~6.
 - 1: 1Sec On 2 Sec Off
 - 2: 0.4 Sec On 0.2 Sec Off - 0.4 Sec On 2 Sec Off
 - 3: 1 Sec On 4.5 Sec Off
 - 4: 1 Sec On 4 Sec Off
 - 5: 0.25 Sec On 0.25 Sec Off - 0.25 Sec On 1.25 Sec Off
 - 6: 2 Sec On 4 Sec Off
4. Press <*(▲)> button to save the setting .
 [Example] If you want to 2 Sec On 4 Sec Off, Press 36*#86*.

5.6 Dial Tone Frequency Control

This function is used to select the dial sent from the handset. Default setting is 350 + 440Hz dual tone.

1. Press 36*#9.
2. Select a desired number from 1(350 + 440Hz), 2(400Hz), 3(425Hz), 4(450Hz).
3. Press <*(▲)> button to save the setting .
 [Example] If you want to 350 + 440Hz, Press 36*#91*.

5.7 Hook flash

When the terminal receives a hook-flash from the connected telephone device, it will automatically allow:

1. For producing dial tone again after a phone number has been dialed without connection.
2. The use of special cellular services which may be available in your cellular service area.

Note: Hook-flash is accomplished in a call through either pressing the dedicated hook-flash key which is available on some phones or through a rapid single press of the hang-up mechanism upon which the handset rests when the phone is hung up.

5.8 ROH (Receiver Off Hook)

If the telephone equipment remains off-hook , meaning that the handset is left off of its cradle as it would be when you hang up, with no dialing activity for about 60 seconds, a ROH tone emits from the receiver for a period of 60 seconds. After ROH tone, Line Lock Out Tone emits from receiver for a period of 60 seconds.

5.9 Restrict Call Mode

While the Restrict Call function is enabled, the specified numbers cannot be called. These specified numbers start with specific digits. The specific digits are set according to the following procedure (Storing the Deny dial number). Among these specified numbers you can permit some numbers by designating start digits by following procedure (Storing the Permit dial number). This terminal has 10 Deny dial numbers (1~10), and max. 32 digits can be stored in each Deny dial number. This terminal has 10 Permit dial number (1~10), and max. 32 digits can be stored in each Permit dial number. If you set Emergency call, the emergency number is not applied to this restrict call.

5.9.1 Set Restrict Call Level

1. Press "36*#11".
2. Press restrict level (1~3)
 - 1 : No restriction
 - 2 : Restriction
 - 3 : Emergency only (All excepting emergency are restricted.)
3. Press "LOCK code" (4 digits).
4. Press <*(▲)> button to save the setting .

5.9.2 Storing the Permit Dial Number

1. Press "36*#12".
 2. Press "1" to enter Permit Dial Number store step.
- Note:**
- If you want to Delete at this point, Press "2" to save.
 - If you want to All Delete at this point, Press "3" to save.
3. Press "LOCK code" (4 digits).
 4. Press one of "Memory number" for permit dial number(01~10).
 5. Press the "digits" (Max. 32digits).
 6. If you want to store more Permit Dial Numbers continue from step2
 7. Press <*(▲)> button to save the setting .

5.9.3 Storing the Deny Dial Number (Restricted dial number)

1. Press "36*#13".
 2. Press "1" to enter Deny Dial Number store step.
- Note:**
- If you want to Delete at this point, Press "2" to save.
 - If you want to All Delete at this point, Press "3" to save.

3. Press "LOCK code" (4 digits).
4. Press one of "Memory number" for deny dial number(01~10).
5. Press the "digits" (Max. 32digits).
6. If you want to store more Deny Dial Numbers continue from step2
7. Press <*(▲)> button to save the setting .

6.System Functions

6.1 Call Waiting

Call Waiting is a feature, which enables you to be alerted to a second incoming call while you are on the first call of your telephone. You have the option of responding to the second call while putting the first call on hold or you can disable the call waiting option during a particular call. Contact your service provider to activate or deactivate Call Waiting.

6.2 Three-way Calling

Three-Way Calling is a feature that enables you to set up a three-way conversation with two other users. Contact your service provider to activate or deactivate Three-Way Calling.

6.3 Call Forwarding

Call Forwarding is a feature that enables you to forward all your incoming calls to another phone number, even if your telephone is turned off. You can still make calls from your telephone even when Call Forwarding is activated. Contact your service provider to activate or deactivate Call Forwarding.

6.4 Voice Mail service

Voice Mail Service is a feature that allows the terminal to receive voice mail and forward it to your telephone when you press a certain sequence of keypad number. Contact your service provider to activate or deactivate Voice Mail Service.

7. FAX Functions(Optional)

7.1 FAX Set-up

To send or receive analog FAX messages, the WLL should be equipped with an analog FAX module(Optional), connected a conventional Fax machine the WLL.

7.2 Sending FAX message

You can send and receive FAX messages using a FAX machine connected to the WLL.

1) Dual dialing Method

1. Load documents to send into a FAX machine.
2. Pick up the handset or press On-hook of the FAX machine.
3. Press <*(▲)>, <*(▲)>, <8>, <1> and wait for dial tone.
4. Dial destination FAX number when you hear dial tone.

2) Per-digit method

1. Load documents to send into a FAX machine.
2. Pick up the handset or press On-hook button of the FAX machine.
3. Press <*(▲)>, <8>, <9>, <*(▲)> and destination FAX number in sequence.
The WLL will make a call automatically.

7.3 Receiving FAX message

You can set the WLL to "Always Mode" or "Once" FAX reception mode.

1. Pick up the handset or press On-hook button of the FAX machine.
2. Press <*(▲)>, <*(▲)>, <9>, <1> to set "Always Mode"
Press <*(▲)>, <*(▲)>, <9>, <2> to set "Once Mode"
3. Wait for a confirmation dial tone. The WLL is ready to receive FAX machine

NOTE 1 : If you set the WLL to always mode, the WLL will transfer every call to the FAX machine connected. If you set the WLL to once mode, the WLL will transfer the first incoming call to the FAX machine and set back to voice call mode automatically.

NOTE 2 : To set back the WLL from always FAX mode to voice call mode.

1. Pick up the handset or press On-hook key.
2. Press <*(▲)>, <*(▲)>, <9>, <3> in sequence.
3. Wait for a confirmation dial tone.

8. Summary Table

1) Advanced Functions

	I	II	III	IV	Explanation
1. Minute alert beep	<*(▲)>, <*(▲)>	1	<*(▲)>Set <#(▼)>Release		Decides whether alert beep should sound at one minute intervals.
2. Alarm	<*(▲)>, <*(▲)>	2	<1><1> AM mode in 12Hour mode	Enter alarm time (00:00~11:59) and <*(▲)>Set	Used when you want to set alarm time(AM mode in 12 Hour mode).
			<1><2> PM mode in 12Hour mode	Enter alarm time (00:00~11:59) and <*(▲)>Set	Used when you want to set alarm time(PM mode in 12 Hour mode).
			<2> 24Hour mode	Enter alarm time (00:00~23:59) and <*(▲)>Set	Used when you want to set alarm time(24Hour mode).
			<#(▼)>Release		Used when you want to release alarm time.
3. Connecting tone	<*(▲)>, <*(▲)>	3	<*(▲)>Set <#(▼)>Release		Decides whether a Discrete tone should Sound when a call is Connected.
4. Voice Volume	<*(▲)>, <*(▲)>	4	<*(▲)>Up <#(▼)>Down	<0> Save	Adjusts the Volume of phone.
5. CID Mode	<*(▲)>, <*(▲)>	5	<*(▲)>DTMF <#(▼)>Bellcore <0> Release		Used when you want to set the phone to display the caller number or name.
6. Outgoing callsLock	<*(▲)>, <*(▲)>	6	Enter 4 digits lock code	<*(▲)>Enable <#(▼)>Disable	Used when you limit use of the outgoing calls(All).
7. Lock code	<*(▲)>, <*(▲)>	7	Enter 4 digits lock code(old)	Enter 4 digits lockcode(new) Enter 4 digits lock code(confirm) And<*(▲)>	Used when you change the lock code

8. Fax Tx	<*(▲)>, <*(▲)>	8	<1> Wait for dial tone	Enter fax number	Used when you want to send a message by a fax machine
9. Fax Rx	<*(▲)>, <*(▲)>	9	<1> Always mode <2> Once mode <3> Reset to voice mode		Used when you receive a message by a fax machine
10. Terminal Reset	<*(▲)>, <*(▲)>	10	Enter 4 digits lock code	<*(▲)>	Return phone to factory settings.
11. Auto Dial time	<*(▲)>, <*(▲)>	11	<0-9>	<*(▲)>	Set Auto dial time(0sec ~ 9sec)

2) Supplementary Functions

	I	II	III	Explanation
1. Speed dial	36*#1	1(On) 2(Off)	<*(▲)>	Set Speed dial function
2. Redial	*(Long)			Set Redial function
3. Emergency	36*#2	1(On) 2(Off)	<*(▲)>	Set Emergency function
4. Hot Line	36*#3	1(Time On) 2(Immediate On) 3(Off)	<*(▲)>	Set Hot Line function
5. Pay Phone Interface	36*#4	1(On) 2(Off)	<*(▲)>	Set Pay Phone Interface f unction
6. Phone Book	36*#5	1(Store) 2(Del) 3(All Del)	<*(▲)>	Used when you want to Phone Book function
7. Voice Privacy	36*#6	1(Enhanced) 2(Standard)	<*(▲)>	Set Voice Privacy function
8. Ringer Freq.	36*#7	1(16Hz) 2(20Hz) 3(25Hz)	<*(▲)>	Set Ringer Frequency(for test)

9. Ringer Cadence Control.	36*#8	1(1Sec On2 Sec Off) 2(0.4Sec On0.2Sec Off-0.4Sec On2 Sec Off) 3(1Sec On4.5Sec Off) 4(1Sec On4Sec Off) 5(0.25Sec On0.25 Sec Off-0.25Sec On 1.25Sec Off) 6(2Sec On4 Sec Off)	<*(▲)>	Set Ringer Cadence Control(for test).
10. Dial Tone Freq.	36*#9	1(350+440Hz) 2(400Hz) 3(425Hz) 4(450Hz)	<*(▲)>	Set Dial Tone Frequency (for test)
11. DM/DS mode	36*#10	1(DM mode) 2(DS mode)	<*(▲)>	Set DM mode or DS mode
12. Restrict Call mode - Level	36*#11	1(No Restriction) 2(Restriction) 3(Emergency only)	Enter 4digits lock code and <*(▲)>	Set Restrict Outgoing Call -Level
13. Restrict Call mode Permit Number	36*#12	1(Store) 2(Del) 3(All Del)	Enter 4digits lock code and <*(▲)>	Set Restrict Outgoing Call - Permit Number
14. Restrict Call mode - Deny Dial Number	36*#13	1(Store) 2(Del) 3(All Del)	Enter 4digits lock code and <*(▲)>	Set Restrict Outgoing Call - Deny Dial Number

9. Troubleshooting Guide

Problems	What To Do
Troubleshoot the conventional wired telephone	In the event you are unable to place or receive telephone calls, first be sure that the connection wire is properly connected to the RJ-11 phone port on the terminal and to the RJ-11 port of the telephone. If unsure whether or not the telephone is operational, connect a telephone, which is known to be operational to the terminal. If service is available with the operational telephone, replace or repair your telephone equipment. If service is still not available, then follow instructions under "Troubleshoot the Fixed Wireless Terminal"
When you hear no sound after hook-off?	Check if the power LED or battery LED of the terminal is on. If off, check if the SMPS power plug is properly connected to the terminal. Check the RJ-11 jack of the terminal connected to the telephone
Troubleshoot the Fixed Wireless Terminal	Check for the appropriate power indication on the LED. If no power, check the adapter (or External Power Supply) connection between the electrical outlet and the terminal. Check for the appropriate Received Signal Strength Indication (RSSI), Power, and Message Indication through the designated LED, respectively.
When the battery LED is off	Check if the battery on/off switch at the bottom of the terminal is on. The backup battery is discharged, Check the Battery Switch or freshly charged one.
When the RSSI LED blinks or off	Check if the antenna is connected correctly, or move the location of the terminal

When the never or poor ring/sound	Check you will achieve the best audio quality with only a single telephone"Off-hoo" at a time Check Re-measure your cable and accordingly. Make the number less than 5 by removing some of the telephones or changing to telephones with smaller REN values.
Voice call works but Data Service does not work	Check the PC setup in Data Service Manual.

NOTE : 1.Only Authorized Service Personnel should remove the cover of the fixed wireless terminal for additional service. The contents of the terminal contain components that present an Electric Shock Hazard if handled improperly.

2.According to the power condition, you can hear a little noise during connection. For further assistance, contact your Authorized Distributor for service and assistance.

※ If the problem you are experiencing persists or is not mentioned above, please contact your local distributor or service center.

10. Specifications

Frequency Range	HTT-800/810	Tx : 824~849 MHz Rx : 869~894 MHz
	HTT-1900	Tx : 1850~1910 MHz Rx : 1930~1990 MHz
Channel Bandwidth	CDMA 1.25 MHz	
Multi Connection	4 REN	
RJ-11 Phone/Analog Fax port	2	
Frequency Stability	± 300 Hz	
Tx Power	Max. 0.377W	
Rx Power Level	-104 ~ -25 dBm	
Temperature of operation	-20℃ ~ + 50℃	
Relative humidity	5% ~ + 95%	
Power Supply(Adapter)	Input : AC 110~240V /50~60Hz Output : DC 12V 1.5A	
Battery Capacity	8.4V NiMH	
Dimension	230 × 175 × 55 (mm)	
Weight(without internal battery)	700g	

* Specifications are subject to change without notice.

Safety Information

1 . SAFETY INFORMATION FOR FIXED WIRELESS TERMINALS

.POTENTIALLY EXPLOSIVE ATMOSPHERES

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

.INTERFERENCE TO MEDICAL DEVICES

Certain electronic equipment may be shielded against RF signal from your wireless phone. (pacemakers, Hearing Aids, and so on)

Turn your phone OFF in health care facilities when any regulations posted in these areas instruct you to do so.

RF signals may affect improperly installed or inadequately shielded electronic system in motor vehicles.

.EXPOSURE TO RF ENERGY

Use only the supplied or an approved replacement antenna.

Do not touch the antenna unnecessarily when the phone is in use.

Do not move the antenna close to, or touching any exposed part of the body when making a call.

FCC RF EXPOSURE INFORMATION

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

To comply with FCC RF exposure requirements, a minimum separation distance of **2.5cm (0.98 inch)** must be maintained between the user/ bystander and the back of the unit, including the antenna.

For more information about RF exposure, please visit the FCC website at www.fcc.gov

WARNING! Read this information before use

SAR INFORMATION

THIS MODEL PHONE MEETS THE GOVERNMENT 'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. *Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure.

The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model as described in this user guide, is [1.13 W/kg](#).

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of [http://www.fcc.gov / oet /](http://www.fcc.gov/oet) after searching on [FCC ID: ODGHTT-1900](#).

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications & Internet Association (CTIA) web-site at <http://phonefacts.net>. *In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

FCC Compliance Information

This device complies with Part 15 of FCC Rules.
Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received.
Including interference that may cause undesired operation.

Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



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