



NetWatchman®
HomeOwner's Quick Guide
Basic Installation and Use

This document has been extracted from the much larger HomeOwner's Reference Manual to assist with basic installation and use. All customers should obtain a copy of this larger Reference Manual – see Chapter 1 for details.

Electronic copies of the larger Reference document are available at:

<http://www.x10home.com/pdfdocs/HOManual.pdf>

This shorter guide can also be found on the web at:

<http://www.x10home.com/pdfdocs/HOQuick.pdf>

Quick Start Guide

Operating NetWatchman

Based upon a typical configuration that has not been further customized after it was installed we provide the following Quick Start Instructions. Read Appendix X for the Operating Instructions customized to your installation.

Your NetWatchman was supplied with fobs that can be used to arm and disarm the alarm system. If the system is entirely disarmed when you use the fob, the system will arm. If you use the fob when the system is armed, it will then disarm.



Using the fob to arm or disarm

To Exit: Close all windows and doors; make certain no curtains will blow; remove pets from the protected area. Touch your key fob. Listen for the beep – confirm the red arming indicator turns on and is not flashing. The yellow indicator lights for ‘away’ mode and flashes during the exit delay. Leave the premises within the exit delay (the factory default is 60 seconds). If the exit delay is too short or you must re-enter, then disarm and later arm again. Failure to leave within the exit delay may cause incomplete protection or a false alarm.

To Enter: Touch your key fob within the entry delay time period (the factory default is 45 seconds). Expect the beeping and red arming indicator to turn off (typically within 3 seconds). If something goes wrong, expect a call from the central station dispatcher and be ready to provide them with your password.

NetWatchman is Beeping On/Off

If NetWatchman is continuously beeping on then off then on...a serious failure has occurred and your protection may be compromised. Proceed to the NetWatchman Master Controller. (You may have multiple devices that look the same. The ‘Master Controller’ is the only device connected to the phone line). Press the ‘Disarm’ button on the Master Controller to temporarily silence the beeping sound.

Phone Service Problems

Every product that connects to the phone line must have a means of disconnection in case of a problem. If you are using a Secure Phone Jack (RJ-31-X), read the Phone Line topic in Appendix A. Disconnecting NetWatchman also causes you to lose protection.

Important – Read This

NetWatchman is not designed for life-safety applications. Never rely upon NetWatchman where a failure could cause loss of life, injury or significant property loss. NetWatchman is not approved by any agencies, public or private, for the protection of life or property.

NetWatchman will only detect burglars in the room in which it is located. Within that room, it may only protect a limited area based upon sensor location and aiming. It is important that you determine the right level of protection for your site and that you purchase, locate and aim sensors to obtain that level of protection. Portable sensors may be bumped or moved causing them to no longer be aimed properly – verify location and aiming often. If a sensor is detecting an alarm at the end of the delay intended for exit, the sensor may not properly arm and may not provide protection until manually re-armed.

NetWatchman includes an optional battery backup in case of power failure. You must decide if this feature is required and, if so, which portions of the system have batteries. Even with battery backup, a sufficiently long power failure will drain the batteries and result in a loss of protection. Although these batteries are rechargeable, batteries have a limited lifetime. They must be replaced when worn or aged.

NetWatchman can be defeated by a skilled intruder. This includes both the sounding of an alarm and the communication of an alarm. When NetWatchman is communicating an alarm, there are many communications-related failures that can occur and these failures may prevent NetWatchman from successfully notifying you or authorities. NetWatchman is not a substitute for good physical security (for example, locks – properly used). NetWatchman is not a substitute for insurance.

Emergency personnel will always arrive faster if you contact them directly instead of activating NetWatchman. DIAL 911 directly if you need immediate help.

This is true of most alarm systems. Activating NetWatchman first may cause NetWatchman to use your phone line further delaying your ability to dial 911.

This HomeOwner's Reference Manual provides additional information regarding limitations and proper use. Read the manual thoroughly. Special attention should be paid to Appendix W (Terms/Warranty / Limitations), sections of Chapter 2 detailing safe locations for NetWatchman, Appendix S and Appendix T. Terms of Agreement are located in Appendix W.

Starting Your Installation? Here's the Big Picture

- You must be familiar with the product location guidelines discussed in Chapter 2.
- Read Appendix A for Installation Instructions. The appendices that follow 'A' show connections for specific products you may have ordered. Read Appendix A first then make the connections shown in the product-specific appendices. If you are doing a typical installation of a Master Unit and one or more Modules, you'll read Appendix A then perform the step-by-step instructions in Appendix B.
- Upon receiving your order, we will email a form to you. This form provides us with the information we need to set up your product/account. Complete this form as soon as possible; there's a simple 'return' button you can click on the form.
Your new product will not be useable until we receive and process your form.
As you read the step-by-step instructions in Appendix B, you'll discover a point where you will stop. **This stop-point occurs before you apply power** to any NetWatchman device. You'll be waiting for an email from us and that email will not arrive until we process your registration form.
- Having processed your form, we'll send you an email with Final Instructions. When you receive this Final Instructions email you'll be able to power-up your system. These Final Instructions will cause your NetWatchman to call our computers and receive your configuration.

Chapter 1 – Introducing NetWatchman

Accessing Information

NetWatchman is manufactured by Genesis Engineering Incorporated. Additional information, including documentation, add-on features and remote access is found at our website: www.x10home.com

We can be reached by phone at (408) 249-5034.

Throughout this documentation you will find references to additional information available on the internet. Many of these links are case sensitive – if you are manually typing the link into your browser you must correctly copy upper and lower case characters.

Information You Need to Have – the *HomeOwner's Reference Manual*

With every NetWatchman Master Controller we ship two relatively brief pieces of printed documentation – the *HomeOwner's Quick Guide* and the *Important Notices*. Both of these printed documents are brief extracts from a much larger document, the *HomeOwner's Reference Guide*. This larger document provides a comprehensive reference for NetWatchman including additional important information for planning your installation, understanding complex features, additional safety information and adding-on features. Given that this larger document is nearly 100 pages, many environmentally concerned customers have requested that we no longer ship paper versions preferring instead to access the larger document online.

You need to have this document as a reference! For an electronic copy visit: www.x10home.com/pdfdocs/HOManual.pdf. If you are an existing customer who has not yet obtained a printed copy and would prefer to receive the larger document in print, call us for your free copy.

How NetWatchman Documentation is Organized

NetWatchman may find itself acting as a burglar alarm in a small, single room apartment or with hundreds of sensors watching an estate-class home. It may be a simple burglar alarm or an elaborate, highly customized system managing lighting, heating, granting secure access to select employees, and notifying you of your child's behavior. Given the range of these applications it is necessary to 'layer' documentation. Documentation is 'layered' in terms of technical complexity (more complex features are in separately read documents) and 'layered' in terms of customization (you receive a separate electronic document that briefly summarizes how your, individual NetWatchman operates).

We've tried to keep much of the documentation 'hierarchical'. So, for example, the much shorter 'Quick Guide' has exactly the same chapter numbers and appendix letters as its much larger 'Reference Guide' – it's just that the chapters are much shorter with much of the information omitted. The 'Quick Guide' Chapter 2 may only contain a few brief paragraphs regarding motion sensors but the larger Chapter 2 in the reference Guide provides a much fuller explanation while also discussing panic buttons, web cams, etc. In addition to the 'Quick Guide' and 'Reference Guide' very advanced customers and alarm industry professionals will find a series of White Papers and online-only

Appendices on our website – many of these are called out in the ‘Reference Guide’. So, for example, Chapter 3 of the ‘Quick Guide’ provides only the most basic explanation of how a NetWatchman burglar alarm is used when setup with factory defaults. The same Chapter 3 in the larger ‘Reference Guide’ provides a tutorial of more advanced burglar alarm features you, as a homeowner, can setup. That same Chapter 3 ‘Reference’ also calls out additional Appendices and White Papers primarily written for alarm industry professionals who may be customizing NetWatchman for commercial sites where employees have restricted access based upon their employee IDs (or larger residential sites where housekeepers may not have access to certain rooms, safes, etc).

Chapter 4 provides a tutorial for customers interested in the exciting capabilities of Home Automation --- this chapter is understandably omitted from the ‘Quick’ documentation but found in the larger ‘Reference Manual’. Chapter 5 is a brief summary of indicator lights, sounds, etc.

Visit our website and click on the ‘My Ideas’ tab – you’ll find even more documentation showing you the vast library of add-on features. Much like music downloads, you can select and customize the features you want and they’ll be added to your NetWatchman. Chapter 3 of the larger, ‘Reference Manual’ also discusses the process of ‘downloading’ add-on features.

And speaking of Customization, every NetWatchman has the capability of creating its own individualized instructions. Referred to as ‘Appendix X’ this electronic/printable document is an add-on appendix to the ‘Reference Manual’ and explains how your unique NetWatchman is currently customized. You can obtain this electronic document without charge as often as you prefer via email by making a request on the web. Chapter 3 briefly introduces you to the free web access that comes with every NetWatchman.

Requirements

- You must have an email account
- You must have voice/telephone service available on a phone jack. Long distance service on that phone number is also required.
- You must have access to the internet – although you do not need a computer at the site
- Never mount a NetWatchman product outdoors or in the attic (requires a dry location; normal living temperatures).

Additional detailed discussion of these requirements is found in the larger HomeOwner’s Reference Guide.

Chapter 2 – Planning Your Installation

NetWatchman – A High-Level Overview

Most of our consumer-installable family consists of ‘table-top’ devices --- small enclosures that are intended to sit on tables in your living spaces. No mounting or tools are typically required for these products. The photo below shows a typical device. Although a motion sensor is optional, most devices in most rooms will have the motion sensor (shown mounted in the rear). An optional battery backup module plugs into the back (not shown) and can rest on the floor or conveniently out-of-view. In addition, the device has a power transformer that is plugged into a wall outlet. Most table-top devices have a small receptacle on the top/back corner. You will receive several small, secure electronically encrypted keys that command NetWatchman when briefly touched to this receptacle. (The key holders can also attach to your key chain).



In the most minimal installation a single, large, common room is protected with a single motion sensor. This device in this first room is the *master unit*. There is only one master unit. The master provides ‘brains’ for the entire system and also requires a connection to your phone line. For greater protection and redundancy, most households will optionally add additional motion sensors in other rooms. These add-on devices are referred to as *modules*. While the most common type of module provides alarm protection in an add-on room, other modules can be purchased to add very different capabilities such as operating lights, thermostats, sprinklers, panic/medical buttons, etc. In addition to expanding the installation by purchasing additional modules, features can be purchased for downloading into the master unit. This is similar to acquiring a new ringtone for your phone or a new music download for your MP3 player. Because of this modular, expandable approach, NetWatchman can provide inexpensive protection in a small apartment/vacation home while also being expandable to provide estate-class protection in a very large home.

NetWatchman can be accessed remotely via the internet (see Chapter 3). When NetWatchman detects an alarm that requires your attention, it can notify you via several different means. These choices range from simple/automated emails sent to your pager through full professional monitoring in which trained personnel offer assistance and then notify authorities.

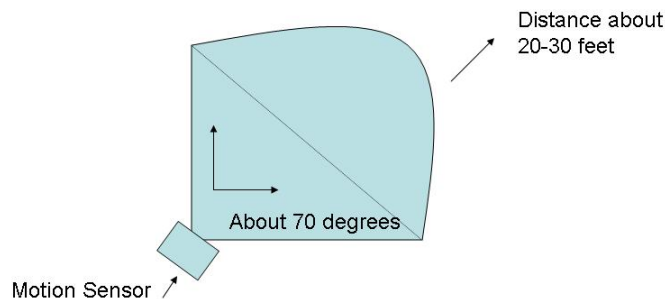
Using Motion Detectors For Burglary Protection

Given sufficient skill, time and equipment, every alarm system can be defeated. Adding security adds not only cost but could also make your own home unfriendly to live in. Protecting an art museum or a home that would be specifically targeted by professional burglars is very different than protecting the average home. Selecting the right security

design, then, is a tradeoff that only you can make based upon your needs, your budget and the convenience of moving about your own home.

The consumer-installed version of NetWatchman relies almost exclusively on motion detectors. How these devices operate is discussed in more detail in Chapter 3 of the Homeowner's Reference Manual. A single motion detector protects only the room it is located in. It must visually 'see' the space in front of it (objects, including most glass/plastic, will block that view and create an un-protected space). The area that it protects will vary based upon height, temperature, etc. However, as a general practice, it will 'see' a space that extends about 20-30 feet out across an angle of about 70 degrees (sort of like a quarter head sprinkler). Though not required, it is common to place a motion sensor in the corner of a room where it will have a substantial view of the room.

Motion Sensor Protection Pattern



It senses any change in the thermal (heat) pattern of objects within its vision (for example, a warm, moving human being). Although curtains are not 'warm' they are an example of something that might move and change the way sunlight shines on the floor. For obvious reasons you should avoid aiming a motion sensor within 8 feet of an air duct and avoid aiming a motion sensor at point-heat sources (fireplace, stove, automobile, water heater, etc). This restriction does not apply if you know with certainty that this heat source will always be cold when you arm the alarm. Avoid aiming the motion sensor directly at the sun or mirrored surfaces that see bright sunlight. Although it is generally not a problem in most living spaces, avoid locations where a spider is likely to build a web around the sensor. If you own pets, they should be removed from the protected areas before you arm the alarm. (If you *must* allow your pets to stay in the protected area, you'll need to have NetWatchman installed by an alarm company. NetWatchman is compatible with very sophisticated motion sensors that are pet-friendly. But, these sensors require advanced installation skills). The motion sensors used by NetWatchman are reliable over a wide range of temperature. However, when testing your sensors you

should be aware that motion technology is generally less-sensitive in rooms that are very warm (greater than 80 degrees).

While our table top sensors are a convenient form of protection, some additional caution is advised. Because these sensors can be bumped (while dusting, perhaps touched while arming/disarming, etc), their position can be changed. If this occurs while disarmed, no false alarm will occur. But, the sensor might be bumped into a new position where it is no longer aimed properly. This could reduce/eliminate protection or cause the sensor to be aimed at a false-alarm-producing heat source. If you are using table top motion sensors, always check to be certain that the sensor remains properly aimed.

Using motion sensors as the primary method of protection results in cost effective protection of whole rooms and makes this version of NetWatchman consumer-installable. But, only you can determine if this approach is right for your needs. This approach assumes that your most likely burglar chooses your home at random, that he does not know the specific location of valuables and that he does not know the specific location of sensors. In this approach we therefore assume that the burglar will wander through multiple rooms and eventually be detected by one or more motion sensors. Because motion sensors are only located in a few rooms, it is possible for a burglar to enter and exit through other rooms and go undetected. Given the profile we've proposed for your home's typical burglar, we believe this is likely and that a few-room motion-sensor-based approach is cost effective. Again, this is a decision you make based on your needs.

For protection while you are away we suggest the following guidelines for locating NetWatchman devices:

- Place at least one, preferably two (the more the better) in high traffic rooms especially on the first floor and towards the core/center of the house. Remember your goal to detect someone wandering through the house --- high-traffic rooms are key.
- Adding more than one motion sensor not only adds protection, it also adds redundancy. NetWatchman sends a special high-confidence alarm signal to the central station when it knows that multiple sensors are all confirming the same alarm
- Every NetWatchman includes a small plug-in power supply with 6 feet of cord; this could be a factor in selecting placement
- Table Top sensors require a flat, stable surface to rest on; this could be a factor in selecting placement
- Consider a motion sensor in your master bedroom. Many burglars will seek this room because it is more likely that they will find watches, wallets and other easily removed valuables. Although one or two high-traffic rooms on the first floor should be a priority, a master bedroom is a good place to catch a 'wandering burglar'
- The Master unit requires a phone connection. This may be a factor in placement. If you need a secure phone jack (see *Reference Guide Chapter 2*), placement of the secure phone jack will almost certainly decide the master unit location
- You'll need to plan a module location where you can easily arm/disarm as you exit and return. Sensor modules and the master unit have the small receptacle that is used for your key fob. As such, the most cost effective approach is to select one of the

high-traffic rooms based upon its proximity to the door you will most often enter and exit through.

- Observe the false alarm rules for motion detectors discussed on the previous pages (hot objects, moving objects, air ducts, sunlight, pets). Room corners are common locations. The sensor must have line-of-sight vision of the protected area. Remember the safety rules that NetWatchman devices are not designed for wet locations, outdoor locations or extreme temperatures (e.g. attic).
- Every NetWatchman module must be located within 150 feet of another NetWatchman module. Adding more modules improves network reliability and redundancy.
- Most NetWatchman products have small, non-skid 'feet' for stability on a table-top surface. Though such non-skid pads are common on other appliances, stereos, DVDs, phones, etc, caution is advised when locating NetWatchman on fine/expensive finished furniture where prolonged contact may leave a mark.
- In a best case scenario, NetWatchman needs about 20 seconds to send an alarm message. Select a Master Unit location such that an intruder is unlikely to find and destroy the Master Unit.

Should I Order Battery Backup?

The Master controller and Display Modules have a small AC power transformer. Though optional, the rechargeable battery (the 'Battery Module') is urged for most alarm applications. The Battery Module plugs into the back of the Master Controller, Display Module or Clock Module. As a physically separate module, it can be conveniently located on the floor or in an inconspicuous location within 5 feet. In addition to providing power during an AC failure, a battery module increases NetWatchman's immunity to some types of electrical noise and transients.

While even the best, professional grade security has limitations regarding the duration of power failure protection, you'll know that NetWatchman and its redundant Zigbee network are designed to operate on batteries during a power failure.

Many computer stores have battery backup devices that can be used with your home computer (known as uninterruptible power supplies or UPS). If you require battery backup we strongly advise **against** these computer power supplies with NetWatchman and strongly **prefer** that you use the optional battery backup module available for NetWatchman. NetWatchman's internal software monitors the status of the NetWatchman Battery Module allowing it send information about a pending failure. When a device not intended for use with NetWatchman is supplying power backup, this sophisticated software in NetWatchman cannot monitor the backup status.

More Information in the HomeOwner's Reference Guide

The larger HomeOwner's Reference Guide provides substantial, additional discussion for planning purposes. This includes the special topics of panic buttons, web cams, door sensors and the possible need for a special Security System phone jack (RJ-31-X). The Reference Guide also provides a complete checklist to assist you in placing your first order.

Chapter 3 – Understanding NetWatchman How It Works

More Information in the HomeOwner's Reference Guide

Most of Chapter 3 has been omitted in this shorter 'Quick Guide'. For a better understanding of how NetWatchman operates and how you might use advanced features, read the more complete discussion found in the HomeOwner's Reference Guide.

A Brief Burglar Alarm Tutorial

NetWatchman can be customized to meet very complex needs. This includes the ability to group sensors together with complex rules allowing certain people with certain privileges to access certain portions of the premises at certain times. There are hundreds of possible arming modes including modes that where your security system also operates lights, thermostats, etc depending upon whether you are At Home, Away, Asleep/Night, or on Vacation. In addition you can establish special rules for simple yet secure use by Housekeeper's, school-age children, etc.

This short tutorial, however, describes a very basic burglar alarm as it is typically setup when the NetWatchman is first installed. All sensors are grouped together and are either '*Armed in Away Mode*' or '*Disarmed in At Home Mode*'. You'll arm and disarm using small fobs that are touched to receptacles on most modules. While there are many different means of arming/disarming, your basic configuration will only use these fobs. Fobs can be customized to perform many complex commands but your basic fobs will *toggle* the arming --- touch the fob when you're presently disarmed and the system arms; touch when armed and you'll disarm. Three fobs came with your NetWatchman Master Unit and each one makes a separately identifiable entry in the log when used.

When you arm the system an *exit delay* will begin. This allows you time to leave the premises before arming occurs. A red indicator confirms arming and a flashing yellow indicator confirms an exit delay. The yellow indicator – labeled *Away* – will turn on solid when the exit delay has expired --- the system is now armed. If you fail to properly exit during the exit delay, a false alarm may occur or some sensors may not properly arm. The factory default exit delay is 60 seconds.

All of your sensors have an *entry delay* in a factory default configuration and this factory-set delay is 45 seconds. When you enter a beeper alerts you. Touch your fob to disarm. If you fail to disarm within the time allotted, NetWatchman enters *full alarm* in which it will notify you or authorities based upon the subscription service you have chosen.

If you subscribe to Professional Monitoring, our dispatchers will call the premises to offer assistance. You'll need to tell them your *Password* to identify yourself. If they fail to reach you, they will typically notify police then place additional calls to persons you have listed.

Although this brief tutorial describes a typical factory setup, many customers will wish to change entry/exit delays as one of their first customizations. You should know that each sensor can be individually assigned to have a *short delay*, *long delay* or *no delay*. Sensors set to *long delay* will have three minute entry delays and three minute exit

delays. The *short delay* value defaults to 45 sec entry and 60 sec exit but is changeable by you the homeowner. If, for example, you changed the short entry value to 55 seconds, then all sensors using the *short delay* would have a 55 second *entry delay*.

Accessing NetWatchman From Off-Premises Via the Web

From virtually any web browser you'll be able to access a wide choice of features. This includes:

- Most recent logging information and the ability to review older, archived logs;
- Connect to your NetWatchman and receive current status and logs within minutes
- Arm and Disarm NetWatchman over the web;
- For advanced thermostat users, change temperature, obtain logged temperatures;
- For advanced sprinkler users, start/block a watering cycle, block specific valves;
- Leave a message for the Central Station Dispatchers notifying them of vacation;
- Review information regarding most recent alarm communications;
- Request a review of critical Central Station Dispatch information (we'll send you an email form that you can review, edit and return);
- And more.....

Appendix X provides information on the web site that should be accessed for your account. You can also reach the correct web page by visiting:

www.x10home.com

and select the tab labeled, 'My Home' followed by the tab 'Access my NetWatchman'.

For security reasons all of these web pages will ask for your account number and passcode. Your account number is shown in Appendix X. It is a letter (typically 'C') followed by 5 numbers (for example, C04998). Your passcode is a secret number you selected between 1 and 65000. (This is not the same as your password, a secret, English word that you would use to identify yourself to the alarm dispatcher).

There are occasions when these remote access services may not be available. Never rely upon these services in a manner where failure to obtain remote access would cause a false alarm, loss of protection or other harm.

Manually Testing Your NetWatchman Burglar Alarm

Although NetWatchman has many advanced self-testing capabilities, it is important to test your sensors on a regular basis. (Some alarm industry experts recommend weekly testing while others recommend monthly testing). We strongly discourage you from arming your alarm and willfully tripping the alarm as a test. Instead, we suggest the procedures below.

If your system consists entirely of motion sensors, a basic test is simple. Each motion sensor has an indicator light that turns on when it senses motion. Without arming the system, move in the protected area. Make certain that the motion areas you think are protected do, in fact, cause the light to turn on. In addition, Display Modules

have an Orange indicator light that briefly lights when information is being sent from the module. The Orange light turns on and stays on if contact is lost between the module and the master. Make certain that the orange light does not stay on.

Devices other than motion sensors usually do not have such indicators. For testing these other devices the preferred approach is to place the system into Walk Test Mode. In Walk Test, a beeper will sound whenever a sensor detects a violation or subsequently restores. Appendix B describes the button pressing sequence that initiates WalkTest for a Table Top Mater Controller (Appendix D for the metal enclosure model).

How to Add / Change Features

You can learn about add-on features by visiting www.x10home.com. Click on the 'My Ideas' tab at the top of the Home Page. You'll find a directory of White Papers organized around several common needs. The White Papers provide a rich, text explanation of available features and how they might meet your needs. For a quick summary list of features, visit www.x10home.com/pdfforms/AppList.pdf (remember that upper/lower case characters are important).

Changing a feature you already own is also simple. Fill out simple, web-based forms and return them via email. We'll make it happen. There's no software to load – nothing to learn or remember. When you purchase a feature, change requests via email forms are free (support life varies by features; typically 3 years).

- Visit www.x10home.com and select the 'My Home' tab; then choose 'Change / Customize My NetWatchman'
- Select the type of change you want to make. Expect to receive an email form that you can use to make changes. You'll need a current copy of Appendix X (your customized operating instructions). Some of the information required on the change forms must be found imbedded in the text of Appendix X. Return the form via email.
- When we receive your emailed instructions, we'll make the changes to the configuration we keep on our computers. You'll receive an email confirming the changes and providing download instructions.

Chapter 4 – Home Automation

Chapter 4 has been omitted in this shorter, 'Quick Guide'. For a tutorial on Home Automation and a discussion on adding features to your NetWatchman, please reference the larger HomeOwner's Reference Guide.

Chapter 5 – Sounds and Indicator Lights

Individual Modules may use indicator lights and sounders in different ways. This chapter is intended to discuss the most common usages on most (not all) modules.

What is *Trouble*?

As discussed in the basics of Chapter 3, NetWatchman often checks its own operation with several complex self tests. If a failure is detected and NetWatchman believes that the failure has a high likelihood of compromising protection, the system will enter *Trouble Mode*. In ‘trouble’ the beepers will pulse on and off and ‘trouble indicators’ will light. (This is usually an orange indicator light on many modules). Trouble is intended to get your attention and can be quite annoying. Because the cause of ‘trouble’ may impact the network link from modules, you can only reliably deal with trouble at the Master unit. The table-top Master Unit features a single button on the rear performs several tasks including trouble silence. The Metal Enclosure version of the Master Unit has instructions posted inside the door. Pressing the designated button will *silence trouble* meaning that the beeper will stop its annoying pulsing but the orange indicator light will stay on. If the cause of ‘trouble’ remains present, any subsequent arm/disarm command will un-silence trouble and cause the beeper to resume (press the silence button again).

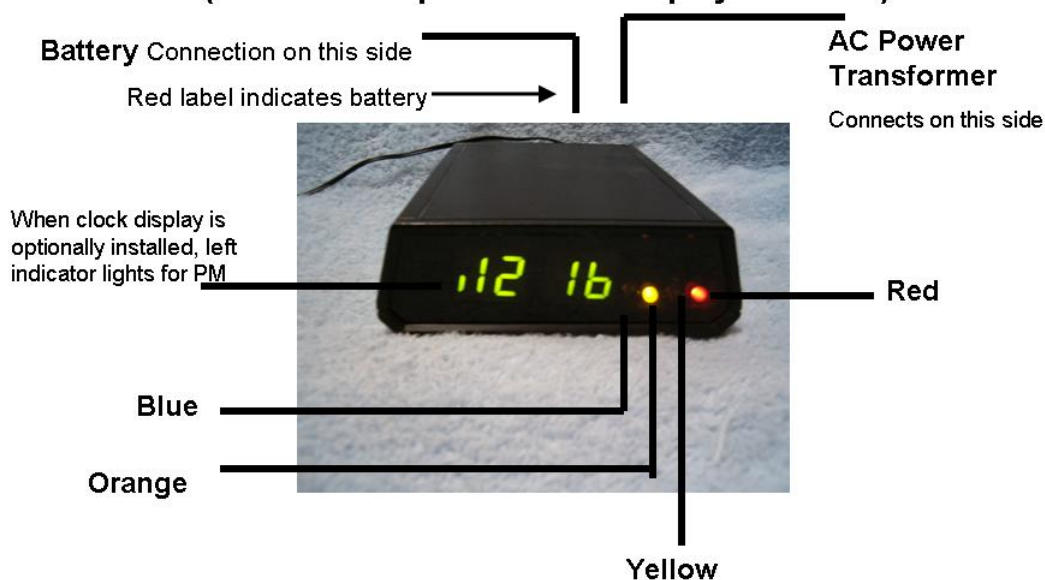
Common Beeping Sounds

In addition to the pulsing beeper associated with ‘trouble’ as described above, several other sounds are possible. This includes:

- A solid, non-pulsing beeper. This means that the system is in pre-alarm or full alarm. Use your disarm fob/code to disarm and stop the sound. On some table-top Master Controllers, the pre-alarm beep is a solid, non-pulsing beeper that runs for the first 4 seconds of your entry delay. On some table-top Master Controllers the pre-alarm beeper may be programmed to remain silent during entry delay.
- Three quick pulses. On some of our systems, NetWatchman is also a household intercom system. This is the intercom call signal.
- A single pulse. This can be several things but is most likely an indication that the system has just successfully exited a download of new features. Check the website to make certain that the feature was setup properly.
- Long pulse followed by three short pulses. If you are using chime arming (or daytime security), this indicates that someone has entered through a protected sensor (but no additional alarm or police notification will occur)
- A quick chirp once every 10 minutes indicates a very serious failure. Call immediately for service.

Typical Module

(shown with optional clock display installed)



Common Indicator Lights

Many (not all) modules use the LED indicators (orange, blue, yellow, red) as follows:

- Orange – solid: System is in Trouble (see description above)
- Orange – solid: On some installations, customers have set up a feature that provides visual indication of an open door, gate, etc (for example, turn on the orange LED if I forgot to close the garage door);
- Orange – Flashing: System is running test software
- Orange – 3-4 sec Pulse: The module just provided status info to the Master (for example, a sensor changed state – a good way to test sensors)
- Blue – solid: System is in Night Mode
- Blue – Flashing: System is in Walk Test (sensor test) mode
- Blue – Brief flash once a minute: Special Occupancy (guest, employee, family)
- Yellow – solid: System is in Away Mode
- Yellow – Flashing: Exit Delay is in process
- Blue and Yellow (both solid): System is in vacation mode
- Blue and Yellow (both flashing): System is starting a download
- Red – solid: Burglary Armed (all of the intended sensors armed)
- Red – Flashing: Burglary arming failed in some state (may be partially armed or not armed at all)

Some modules, including the Table-Top Master Unit, have a Green power indicator on the far left side. In addition, the Table-Top Master has a Red indicator on the far left side that will light when the Master Unit is using the phone line.

Appendix A

General Installation Instructions

Always Read these Instructions First because they apply to all NetWatchman products unless otherwise stated.

Starting Your Installation? Here's the Big Picture

- You must be familiar with the product location guidelines discussed in Chapter 2.
- Read Appendix A for Installation Instructions. The appendices that follow 'A' show connections for specific products you may have ordered. Read Appendix A first then make the connections shown in the product-specific appendices. If you are doing a typical installation of a Master Unit and one or more Modules, you'll read Appendix A then perform the step-by-step instructions in Appendix B.
- Upon receiving your order, we will email a form to you. This form provides us with the information we need to set up your product/account. Complete this form as soon as possible; there's a simple 'return' button you can click on the form.
Your new product will not be useable until we receive and process your form.
As you read the step-by-step instructions in Appendix B, you'll discover a point where you will stop. **This stop-point occurs before you apply power** to any NetWatchman device. You'll be waiting for an email from us and that email will not arrive until we process your registration form.
- Having processed your form, we'll send you an email with Final Instructions. When you receive this Final Instructions email you'll be able to power-up your system. These Final Instructions will cause your NetWatchman to call our computers and receive your configuration.

You'll receive a final email confirming that our computers have been reached. In many instances, you'll also receive an emailed copy of Appendix X --- Operating Instructions customized for your installation.

General Instructions for NetWatchman Installations

1. Unless otherwise stated, NetWatchman is not intended for installation outdoors, in wet locations or in extreme temperatures (such as an attic or unheated basement). As with any appliance, observe good fire safety by keeping NetWatchman away from flammables and by providing adequate air flow around NetWatchman.
2. Read and understand Chapter 2 to properly plan your installation.
3. Read and understand Appendix T regarding safety precautions that must be observed when handling high capacity batteries. Failure to do so could result in fire or burns. Read and Understand Appendix S regarding safely making phone line connections.
4. Always observe electrical safety regarding extension cords and line voltage connections.
5. All installation instructions should be complete and checked before connecting the AC power transformer and before connecting the battery. When everything

- else is complete and checked, connect AC **then connect battery last.** Always disconnect both the battery and AC when working on NetWatchman. **Use only the AC transformer supplied with your NetWatchman.** Other transformers may appear to operate but may not properly charge the battery (perhaps even causing a hazard). It is important to properly distinguish between the AC power jack and the battery power jack. The battery jack and plug are identified with a red marker. If the red marker is worn or missing, do not proceed.
6. Most NetWatchman modules include a low power radio transmitter. Although these devices typically emit less power than a cell phone, you should not locate NetWatchman where it remains near your body for any length of time. A separation of at least 12 inches is required. The low power radios in NetWatchman have been designed to operate in most conditions. However, best results are obtained when the device is at least 2 feet above surface of the earth. Avoid mounting locations where there is a particularly large metal object within 3 feet (a washer, a water heater, air conditioner, metal-topped tables). Some modules have a small, visible antenna. That antenna must remain attached, must not touch a metal object (such as a hangar in your closet), and must be oriented to be vertical from the surface of the earth.
 7. Motion sensors are shipped pre-wired. **Never open a motion sensor.** (There is a small sensing device inside that is easily damage by any physical contact. Even the oil from a hair follicle on your hand could contaminate the sensor).
 8. NetWatchman uses a standard phone line to dial our computers and it is through our computers that an internet connection occurs. Never directly connect NetWatchman to your router, Ethernet, network port or internet appliances.
 9. Two NetWatchman products have battery enclosures that must be opened to replace batteries. One of these enclosures is the Battery Module the other is the Wireless Door Transmitter. Devices that are intended to be opened for battery replacement are specifically labeled. Instructions for battery replacement are in Appendix T. Other than these two exceptions, NetWatchman Table Top modules have no serviceable parts inside and should never be opened.



Table Top products such as this should never be opened

General Instructions Regarding Cables and Sensors

There are five types of cables that might connect to a NetWatchman. Two of the cables provide power and have similar, power-type plugs. One of these two comes from the AC power transformer. The other power cable comes from the battery. Though these cables have the same plug, the product will not operate properly if you switch the two cables. The battery cable may have a red identifying tag. For each NetWatchman product, read the labels carefully to understand which power jack is connected to AC power and which is connected to battery.

The other three cable types carry (not all devices have all three cable types):

- Sensor Data (from motion sensors, door sensors, wireless sensor receivers, etc)
- Auxiliary data (connections to automation modules, thermometers, etc)
- Phone Signals

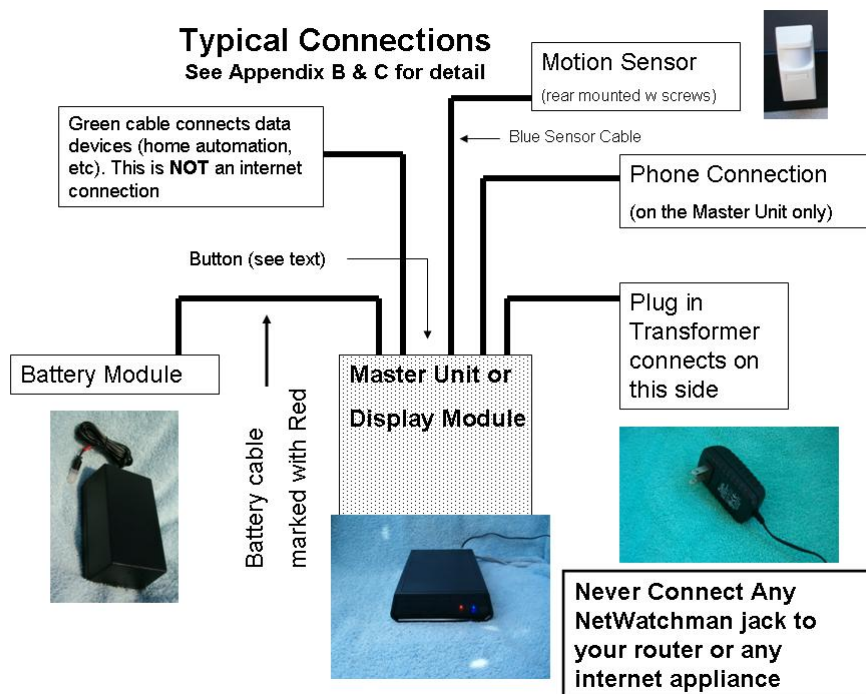
On the Table Top Master and Modules, these cables may all use the same plug **but are not inter-changeable**. This page provides general instructions - Appendices in the HomeOwner's Manual provide details unique to each product.

Read labels carefully and do not misconnect cables **damage will result.**

A BLUE CABLE or a BLUE TAG on any colored cable is a SENSOR CABLE.

A GREEN CABLE or a GREEN TAG on any colored cable is an AUXILIARY DATA CABLE.

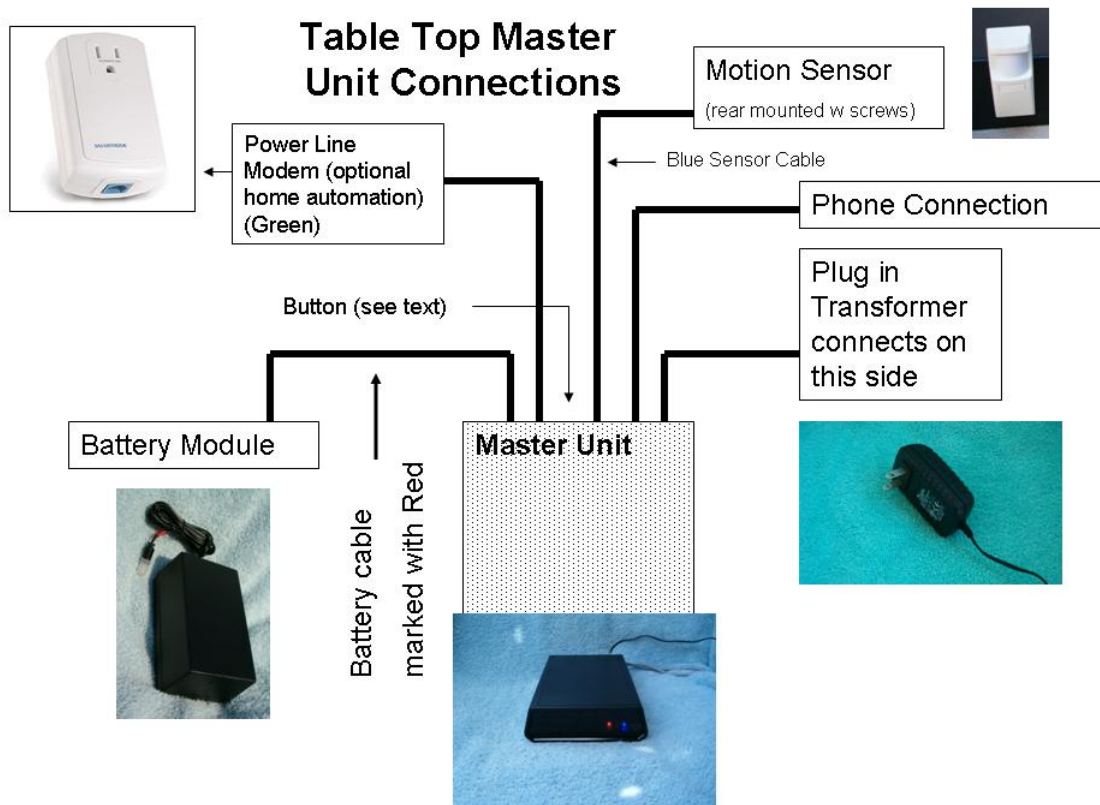
BLACK cable, SILVER cable or a BLACK TAG on a cable is a PHONE CABLE. Because NetWatchman uses a standard phone line to connect to the outside world, there is no 'internet' or 'ethernet' jack on NetWatchman. **NEVER CONNECT A NETWATCHMAN JACK TO YOUR ROUTER or other internet appliances.**



Appendix B – Installing the Table Top Master Unit Along with Table-Top Modules Step-By-Step Installation Instructions

Read Appendix A for instructions that apply to all NetWatchman then complete the installation using the diagram below:

OBSERVE CABLE COLOR CODES AS DESCRIBED IN APPENDIX A



Step-By-Step Installation Instructions

When NetWatchman is first unpacked, it knows nothing about your sensors or your configuration. It will not operate until it is loaded with your configuration (referred to as 'downloading'). Similarly, when you purchase new features or new modules, the Master must receive that new configuration information. Because modules 'learn' their configuration from your Master, new modules will not operate and **should not be powered up** until the Master has received configuration information from our computers (downloading to the Master).

Whenever you order NetWatchman components you will receive a confirming email. This email often includes a form that you must complete and return to us (usually by email). The form tells us how to setup your new component. In the case of your first

installation of your Master, you will not be able to complete, test and use your NetWatchman until:

- We must receive and process the configuration form you must send;
- We will send you an email with 'Final Instructions' – this email confirms that your configuration information is available on our computers and instructs you to perform a 'download' of your configuration;
- You complete the download of your configuration over the phone line. By the following the instructions we provide in that email, your NetWatchman will call our computers over the phone line and receive its configuration.

Step by step, here's what you need to do...

Step 1: Unbox your shipment. Verify contents against the Packing List. Your shipment may have multiple boxes – keep the items that came in each box together – we strongly urge that you not mix boxes together. In some instances, you may need serial numbers on your modules to complete the email form in step 2 below.

Step 2: If you have not completed the configuration form(s) you received by email, do so as soon as possible. As discussed above, the 'final step' requires that we receive and process this information. To avoid delay, complete this registration form early. Allow at least one business day for us to process the form and send you 'Final Instructions' by email. In the case of display modules where you have added a sensor, you may need to associate a module serial number with a location as you complete the email form. This tells us 'where you put the sensor' so that log files you later receive will accurately describe that sensor.

- You can later change the location you associate with each serial number. But...it's **really important** that you keep these descriptions accurate. If you move a serial number to a different room or mix serial numbers, the log files you receive will have incorrect information and it becomes very difficult to use your alarm or diagnose problems.
- Keep a copy of the serial number you assign for each location. That way, if you set modules down while working on them (as, in the next step), you won't confuse the locations.

Step 3: If you ordered optional motion sensors they must be mounted to the rear of your modules (or master unit). The Whole Room Motion Sensor (Model 121) has a small mast with three screw holes that mounts on the back of a module. Screws are included. Handle motion sensors with care --- do not crush or squeeze the thin, white, plastic 'lens'. The Whole Room Motion Sensor has a short, blue cable that it plugged into the jack with the blue dot intended for sensors on the back of the module.

Step 4: Place the Master Unit in its intended location. Referencing the photo/drawing above for proper connections, make the following connections:

- Connect the phone line to your phone service. If you are using a standard phone jack (RJ-11), use the phone cable provided. The small end connects to your standard phone jack and the large end connects to the NetWatchman Master Unit

(only the Master Unit uses the phone jack). Further phone cable information including use of a Secure Phone Jack is described in the HomeOwner's Reference Manual Chapter 2 (Planning) and Appendix M (Phone cable / diagram).

- Connect the power transformer into the proper jack. There are two power jacks on the rear --- one for battery and one for transformer. They are not inter-changeable. **Do not yet connect to your power outlet. Do not apply power.**
- If you ordered a battery module, **do not yet connect the battery.**
- If you have ordered an optional Home Automation Interface, **do not connect the Home Automation Interface at this time.**

When Step 4 is complete, you must now wait for the email from us. Nothing should be connected to power.

Step 5: When you are ready to perform the download instructions in the email, you now connect the AC power transformer of the Master Unit to an AC outlet.

- Do not connect battery modules yet. Do not connect the Home Automation Interface yet.
- Leave the Modules unplugged. Do not power up Modules (other than the Master Unit) until the download is complete.
- As explained in the Final Instructions Email, you must have a phone line connected to the Master Unit and phone service, including long distance service must be available on that phone line.
- The Final Instructions email will tell you to press the button on the rear of the Master Unit. **Do not press the button until the Final Instructions email arrives.** This starts a 'download' – your NetWatchman calls our computers and receives your customer-unique configuration.

STOP – Do not perform any of the steps below until your Master Unit has successfully received its download configuration.

Step 6: The download instructions in the email also tell you how to verify that the download of your Master was successful. Make certain you have followed those instructions. Remember, the next steps are guaranteed to fail unless your Master has the proper configuration information loaded from our computers.

Step 7: When you are certain that the Master Unit has been properly downloaded, it is time to bring-up each module. This is done one-by-one. Follow these directions for each module making certain that the module is properly operating before applying power and starting another module. In general, you can initialize Modules in any sequence – although modules that are very far away from the Master should be initialized last.

Begin by temporarily moving the module within 30 feet of the Master. Connect AC power (leave battery disconnected). When the module first powers up it will rapidly

flash between its orange and yellow indicator lights. This indicates that the module has not yet learned anything from your Master unit. You will see several lights briefly flash and will likely hear a brief chirp during the 'learning' sequence. Be patient - this may take several minutes. At the very end of the sequence, success is defined as:

- Orange/yellow flashing has stopped
- Although the orange indicator may occasionally turn on it does not stay on

Appendix C provides further detail regarding the Table-Top Display Module. If the lights fail to flash as indicated, see Appendix C for troubleshooting. After the module successfully passes the indicator light test unplug the module and move the module to the proper location in your house. Remember to put each module with its unique serial number in the location you designated for that serial number. When you locate each module, apply AC power at that location (no battery connection yet). Once you have initialized a module, it is important that it be powered up in its permanent location before you proceed to initialize another module.

When you power-up the module at its permanent location watch for the orange indicator light:

- Should turn on at least once
- Should turn off at least once; may flash several times but does not stay on

Repeat Step 7 for each module until all modules have passed the indicator light test.

Step 8: When all modules have been properly initialized, connect battery modules properly.

Step 9: You must now test each motion sensor in each room --- does the motion sensor detect motion in the entire area in which you intended coverage? Each motion sensor includes a red indicator light built into the sensor (not the module...the sensor itself). When motion is detected, the sensor briefly lights. For each motion sensor, walk through the protected area. This red indicator should light. Move to another location in the protected area. Stop moving until the red light is off, then move again and watch for the red light. For each sensor, repeat this several times in several places.

Repeat Step 9 for every motion sensor.

Step 10: If your installation includes a Home Automation Interface, this device is plugged into the GREEN jack on the rear of the Master Unit. See Appendix L in the HomeOwner's Reference Manual.

This concludes the step-by-step installation instructions.

Table Top Master Unit – Special Button (on the rear)

Most customers will only use this button under unusual and exceptional conditions – not a day-to-day use. The button can perform many different functions based upon the current state of the system.

If the system is in Trouble (the beeper is pulsing on/off indicating a serious failure), you can silence the pulsing beeper by pressing the button. This will also send a log file to our computers so that the Trouble condition can be diagnosed. This is the highest priority use of the button. As such, if the system is in ‘trouble’, this is the single function performed by the button and none of the instructions that follow on this page will operate.

If the system is Armed (and not in ‘trouble’) pressing the button will force a disarm. This disarm is considered “suspicious” because you did not properly use your encrypted fob (or master code) to properly disarm. If you subscribe to Professional Monitoring, this “suspicious” disarm will result in your system placing a long distance call to send an alarm signal and the Monitoring personnel will call you to require a password. Do not use this function unless all other proper methods of disarming have failed. Do not use this function as a test (additional charges may apply). This is the second highest priority use of the button. As such, if the system is armed this is the single function performed by the button and none of the instructions that follow on this page will operate.

If the system is Disarmed (and not in trouble) the system will perform a maintenance function based upon the number of button presses you enter. Each button press causes a brief chirp (allowing you to count the button presses). Count the chirps and after reaching the desired count, continue to hold the button down (don’t release the button after you hear the chirp – just hold it down for about 4 more seconds). Make certain the system is in a disarmed state first (use your key fob or master code to disarm first if the system is armed). Then:

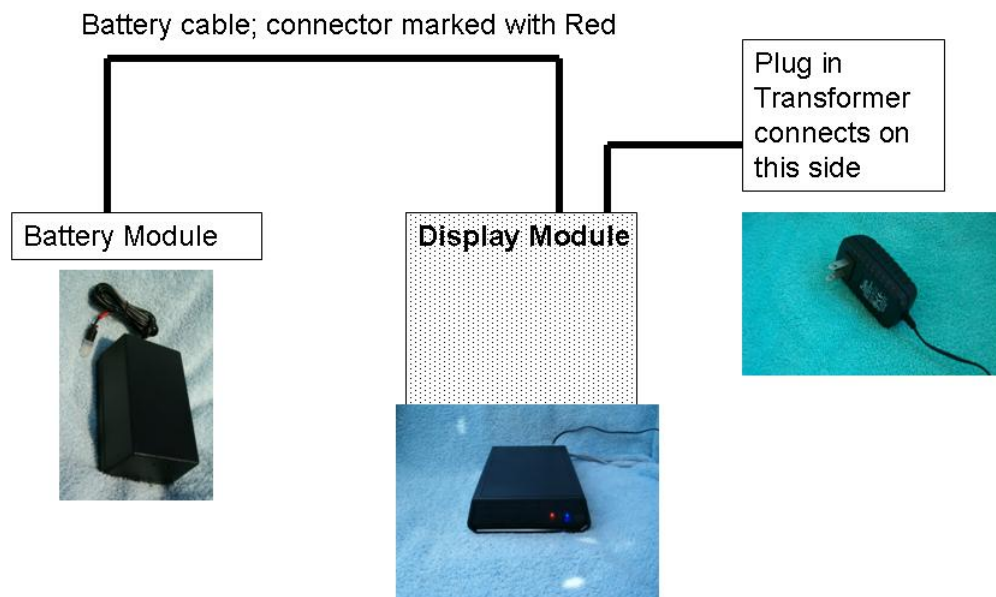
- One chirp then hold the button to arm the system in AWAY mode.
- Two chirps then hold the button to send log information for analysis; you’ll receive the information via your email.
- Three chirps then hold to initiate a download of new features you have already ordered from x10home.com. (Do not use this function unless you have received an email instructing you to perform a download).
- Four chirps then hold to arm the system in NIGHT mode (if enabled in your configuration)
- Five chirps then hold to enter WalkTest mode (sensor test mode as described in Chapter 3). Pressing the button at any time during walktest will cause you to exit walktest and resume normal operation.
- Six chirps then hold will turn on selected home automation devices for testing (if automation is installed and if a test feature is programmed). Seven chirps issues a device off as part of this same automation test feature.

Reminder – If NetWatchman uses a special alarm industry phone jack (RJ-31X – wider than a normal phone jack), improperly disconnecting the cable will cause all phones to go dead. You won’t be able to call us for technical assistance. See Appendix R.

Appendix C – Installing a Table Top Display Module

Read Appendix A for instructions that apply to all NetWatchman then complete the installation using the diagram below:

Display Module Connections Table Top Model sensors can optionally be attached to this module



In some instances, you may be using the table-top module as a status display only (no sensors attached). The (optional) Whole Room Motion Sensor mounts to the back of a status display module using three screws (supplied). Sensors are attached to a specially labeled and color coded modular connector. Connect the BLUE color coded Sensor Cable to the BLUE color coded jack on the back of the Sensor Module. If you are uncertain regarding the correct connector, do not proceed. **Incorrect connections may immediately and permanently cause damage.**

Some Table-Top Sensor Module may also have optional buttons or switches in the rear. If present, these functions may be programmable (see your unique Appendix X for applicability to your installation).

Power-up Your Module – Here’s what should happen

(These directions apply to several modules types including the Status Display Module and the Clock Module).

The yellow indicator will very briefly flash when power is first supplied. This brief flash confirms that the processor in the module has started properly. This should always happen when you apply power.

First-Ever Power-Up:

If your module has just arrived from the factory with no prior power up...

Modules ‘learn’ their programming from the Master unit and, as such, a new, never-used module goes through several additional steps on first power up. Because a module learns from the Master, a new module will not properly operate until it has been setup in your configuration and you have downloaded the configuration from our computers to your Master unit.

The master unit must already have power before any new modules can ‘learn’. If you are just now applying power to the Master, wait about 3 minutes before ‘learning’ new modules. Then, follow these directions for each module one by one --- that is, power up each module and allow it to complete its learning stage before applying power to another module. To learn, you must move each module to within 30 feet of the master. Most modules have two power jacks – one for AC power and one for an optional battery backup. These are not inter-changeable. Connect the AC power to the AC jack – leave the battery disconnected until all new modules have ‘learned’.

When the module first powers up it will rapidly flash between its orange and yellow indicator lights. This indicates that the module has not yet learned anything from your Master unit. You will see several lights briefly flash and will likely hear a brief chirp during the ‘learning’ sequence. This may take several minutes. At the very end of the sequence, watch for the orange indicator to turn on then turn off. If the orange indicator turns off and stays off, the module has successfully joined your configuration. You are done with this module – no need to read further in this Appendix. Repeat this procedure for any other new modules.

Trouble Shooting if your module fails to Learn on First-Ever Power Up

You’ll probably need to call us for further assistance. Before calling us, please carefully check the following items – these are the questions we’ll be asking you.

- Were you within 30 feet of the Master Unit? Was the master unit powered? What lights were on at the master unit? When did your master unit receive the download that included information about your newly added module?
- On your new module, did your yellow indicator flash first when you applied power? (even before the yellow/orange flashing).
- Did you observe the yellow/orange flashing? Is it still flashing between yellow and orange?
- Did you hear a chirp from this new module? Was it a brief chirp (or was it a long beep followed immediately by three distinctive chirps)? *Brief chirps (there may be many) are heard when the radio has heard network traffic mid-way through the learning process – this is expected. A single, longer beep is usually heard just*

as 'learning' has successfully completed; this is also expected. But, a long/short pattern of beeps may(?) indicate an unexpected radio problem.

- Did you observe at least one flash of the red indicator? *These are expected as the module joins the network.*
- Did you observe at least one flash of the blue indicator? *This is, perhaps, the most important question because it indicates that the master knows of this module and has sent learning' information to the module.*
- After the yellow/orange flashing stopped, the orange indicator should turn on. Did this happen? Did the orange indicator then turn off and stay off?

If your module has already learned its configuration from your Master on a previous power up, here's what should happen

The orange indicator will turn on and may stay on for up to a minute. During this time the module is logging onto the network and finding the master unit. If the orange indicator turns on and never extinguishes, the module was unable to establish reliable communication with the master unit. After first communication is established, you may witness several additional indicator light flashes. This typically includes a red LED flash about 20 seconds after the orange turns on and then a second red flash about 10 seconds after the first. This indicates that the module is accessing its radio/network. The exact indicator light pattern may vary depending upon features installed.

The entire process should take less than 2 minutes (30-40 seconds is typical). When completed, the orange light should remain off except for a 2-3 second flash that occurs whenever the module is sending information to the master (for example, a sensor changed state).