

IT IS TIME TO BRING HONESTY AND RESPECT TO HOME SECURITY AND TO MAKE THIS BUSINESS LOW COST, EFFICIENT, RELIABLE AND OF GREAT WORTH!

**LET'S GET REAL ABOUT HOME SECURITY
YOUR CURRENT HOME SECURITY SYSTEM IS WORTHLESS**

NABORLINK IS THE ULTIMATE NEIGHBORHOOD SOLUTION FOR HOME SECURITY

HOME SECURITY WILL NEVER BE VIABLE UNTIL NEIGHBORS BECOME INVOLVED

(SEE WHAT "[REVERSE NOTIFICATION](#)" IS: Click link)

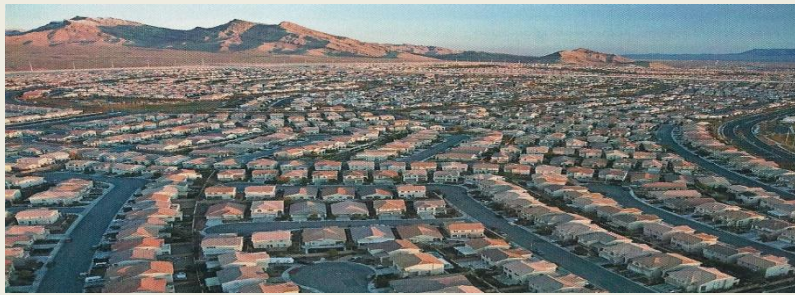
**NABORLINK SECURITY NETWORK
SYSTEM DESCRIPTION
Version 1.5 January 2018
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!!! PRELIMINARY !!!

**Ruel Ross Clark, Inventor
Bluffdale, Utah**

Introduction

HOW A TYPICAL NABORLINK COMMUNITY WOULD LOOK



Each home is connected through the internet to four neighbor homes and each of those homes is also connected to four neighbor homes through the internet making a network continuum throughout the entire community guaranteeing crime free communities.

With this NABORLINK network connected to police dispatchers and their closest patrol cars, fire stations and maintenance stations, the entire community can have the fastest notification and response to any emergency with each neighborhood having members trained by the state as community emergency response teams (CERT) and as fire and police volunteers.

TYPICAL HOME INSTALLATION



Consoles (Display and keypad) located in master bedroom and by every outside door.

Laser distance sensors outside, over every outside window and door in the home and garage and out buildings. Station includes, temperature, glass breakage, tampering sensors

Magnetic sensors inside over every outside door including garage.

Smoke detectors in every bedroom and kitchens and in the garage, attics and out buildings. Station includes heat sensing and exhaust fan control and fire retardant application.

Speaker stations with room adjustable volume, located by outside doors and in bedrooms.

All consoles and sensors connected to controller over one small, hidden cable.

Controller connected to internet or telephone line.

There are NO motion sensors inside the home allowing unrestricted movement in the home at all times.

Safe package delivery that allows a delivery agent, when approaching the NaborLink home, to send the package routing number to this home which releases the door, allowing the door to be pushed open and the placing of the package(s) inside the home. After the delivery, the door returns to the locked condition

VIEW ALL OF THE PROTECTION AND FULL SERVICE STATIONS AVAILABLE

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SECTION ONE

Developmental History

When the inventor moved into a newer home a few years ago, he considered getting an alarm system since the home was isolated. He called several alarm companies to see what they had to offer and, being a developmental engineer, he soon realized that they were very inadequate for several reasons.

1. They are dependent on a functional telephone line, a radio frequency connection, a cable connection or a backup cell phone subsystem, all of which are easily defeated. (See References)
2. They use inside motion sensors whose sensitivity was difficult to adjust and required manual station identification.
3. Sensors are connected to the system by wireless means which are susceptible to electrical noise and require batteries at each sensor.
4. They use zones in the home to isolate protected areas thereby confining the family to an unprotected floor level or a set of bedrooms when their system was armed.
5. They are inexpensive to obtain but the monthly fees are exorbitant.
6. Response time for intrusion was inadequate for emergencies. They used call centers that increased the response time. Alarms were often answered by the alarm company themselves.
7. Fees are assessed for false alarms and did not provide a warning when leaving a home.
8. The systems are hard to understand and confusing to use resulting in 98 of every 100 alarms to be false.
9. The basic intrusion systems did not provide smoke alarms or any other service. (See References)

The author realized that here was a service that was not adequate for its intended purpose and was ripe for a system to be developed that overcame these deficiencies and utilized the state of the art in microcontrollers to perform other services.

He then set out to develop the NABORLINK system to overhaul and revolutionize home security with the following specifications:

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NABORLINK Specifications

1. The internet will be used to periodically send and receive alarm or normal status to four surrounding neighbors. The period will be set at one minute. Absence of a receive status (“reverse notification”) is treated as an intrusion and fire and automatically sent to authorities by the neighbors. This provides a fivefold benefit.
 - a. Allows the neighbor to help if properly trained to do so.
 - b. Insures that alarms from any home are properly sent to authorities regardless of the physical condition of the home.
 - c. Real time alarm monitoring with just four homes rather than real time monitoring thousands of subscribers with one central monitor.
 - d. Relying on high quality electronics and customer training rather than depending on call centers or alarm company follow up for verification.
 - e. Eliminates confusion concerning the correct responding authority since this is completely resolved during signup and installation.
2. The status will identify the neighbor, the alarm, if any, and the location of the alarm in the home area (floor and home coordinates), and whether inside or outside of the home.
3. Alarm status will also be sent to the local fire department for smoke and heat alarms and to the police dispatcher for intrusion.
4. In addition to the point of smoke origin, the fire department will also receive the location of the nearest fire hydrant and get a printed copy of the approximate appearance of the home and floor plans of the home affected by the alarm.
5. Each home may include a door release device that will release a locked door and allow it to be opened allowing emergency neighbors and emergency personnel to enter the home. It is actuated by any alarm requiring entry and by entering the code into the doorbell pushbutton.
6. The system will include internet capability to send and receive without the need of a computer.
7. It would also function for homes without the internet by verifying the integrity of the telephone line by making a short call to a central computer every fifteen minutes. If the call was not received in the specified time, an alarm would be sent as above to the respective neighbors and authorities. Home alarms would remain unchanged.
8. A control computer will receive maintenance alarms and keep an accurate record of the home information which will allow it to be sent to neighbors and authorities and for updating the home data base when necessary.
9. The system would use external intrusion sensors over each door and window allowing the family complete freedom to move about within the home. These sensors would measure absolute distance and not function like broad range motion sensors.
10. It will use inexpensive and reliable commercial smoke sensors by monitoring the ionization circuitry current without modification.
11. It will use sensitive vibration sensors for noise sensing to report any attempt to enter through the walls of the structure or breakage of windows of the home and glass surface strip inputs for glass breakage all imbedded in the intrusion sensor.

12. The system will use a hard wired network loop, immune to electrical noise, composed of a small, protected cable that would connect to each sensor eliminating the need for batteries at each sensor.

13. The stations will automatically be identified during installation (plug and play) eliminating the need for manual station switches.

14. It will include a battery at the main controller that will be constantly monitored for capability and would operate the system without electrical power to the home for at least two hours and smoke detectors for two days allowing sufficient time for power to return to the home and indefinitely with a connected to a twelve volt auto battery.

15. It will provide a simple code entry to turn off an impending alarm if any door is exited or entered during armed operation.

16. False alarms will be minimized by:

- a. Using trained neighbors as supplemental responders rather than call centers.
- b. Providing a “second chance” to cancel an intrusion alarm by warning the subscriber by voice when leaving the home and a flashing led bank by the handle of each door.
- c. Providing a simple smoke clearing procedure if smoke is caused by “burned toast”.
- d. Providing a simple procedure to suspend but not turn off alarms during periods of heavy door traffic or window cleaning by entering the time at which the suspension is to begin and end. Return to protection would be automatic with an audio warning.
- e. All sensors are analog with an operating range which, if exceeded, causes a maintenance alarm that is transparent to the subscriber. Repairs would be automatic without any subscriber action.

17. The entire basic system is targeted for medium to low income customers and will cost less to install than conventional systems and will include smoke alarms and will cost no more than a projected \$10 per month for lifetime service, training and replacement.

19. The system will be able to readily connect in a “plug and play” fashion, not only the basic stations, but all other types of stations such as outlined in SECTION TWO of this document with special emphasis on those stations associated with Homeland Security. (Type O-Biological, Radiation, Noxious Gases). A special code will identify critical personnel living in the home.

(See especially the reference: <http://www.pbs.org/wgbh/nova/dirtybomb/ferg-030305.html>)

20. All systems, throughout the country and the world, will be manufactured according to the above standardized specifications to insure uniformity in manufacturing, quality and customer training.

21. Indemnification for any subscriber that suffers a loss due to a NABORLINK system failure.

WITH THESE SPECIFICATIONS, ESPECIALLY “REVERSE NOTIFICATION” AND ULTRA RELIABLE COMPONENTS, THIS SYSTEM WILL PROVIDE ABSOLUTE ASSURANCE THAT NO UNINVITED PERSONS WILL BE ABLE TO ENTER THE HOME WITHOUT NOTIFICATION OF NEIGHBORS AND AUTHORITIES AND PROVIDE INTRUSION AND SMOKE ALARMING WHETHER THE HOME IS OCCUPIED OF NOT.

‘YOU ARE NEVER ALONE WITH NABORLINK’

Components of the System

Controller:

Processor is a Freescale microprocessor, RS 485 interface, digital to analog converters, Ethernet interface, multiple i/o ports. Flash memory holds for a minimum of 100 years. This same processor family is used in automobile electronics

RJ45 internet interface connector for high speed connection to the internet through the subscriber's router or an independent modem

RS485 interface driver for two way communication with up to sixty four stations

DTMF transceiver and DAA for connection to the telephone line for “telephone only systems“

Console contains an LCD display with forty blue characters on two lines with white backlighting

Stations:

Processors are NXP with flash eeprom that hold memory for a minimum of 100 years

Telephone Type -keypads are Grayhill with tactile push buttons with a minimum of a three million actuation lifetime. The keypad is the only mechanical part in the system.

The system is protected against tampering and lightning strikes.

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Simplified Operation – All That Is Needed

This system is designed to very be simple and easy to operate.

When alarms are armed, the code must be entered before leaving the home.

When entering the home, the code is entered after entering.

Audio warnings are voiced when the door is opened to remind the subscriber to enter the code. A flashing LED display also warns the subscriber to enter the code before exiting.

If the code is not entered within one minute, an intrusion alarm is generated.

Therefore, all a subscriber needs to do in an emergency is ... nothing.

An alarm may be cancelled in the home and all notified parties at any time by entering pound(#) then the code.

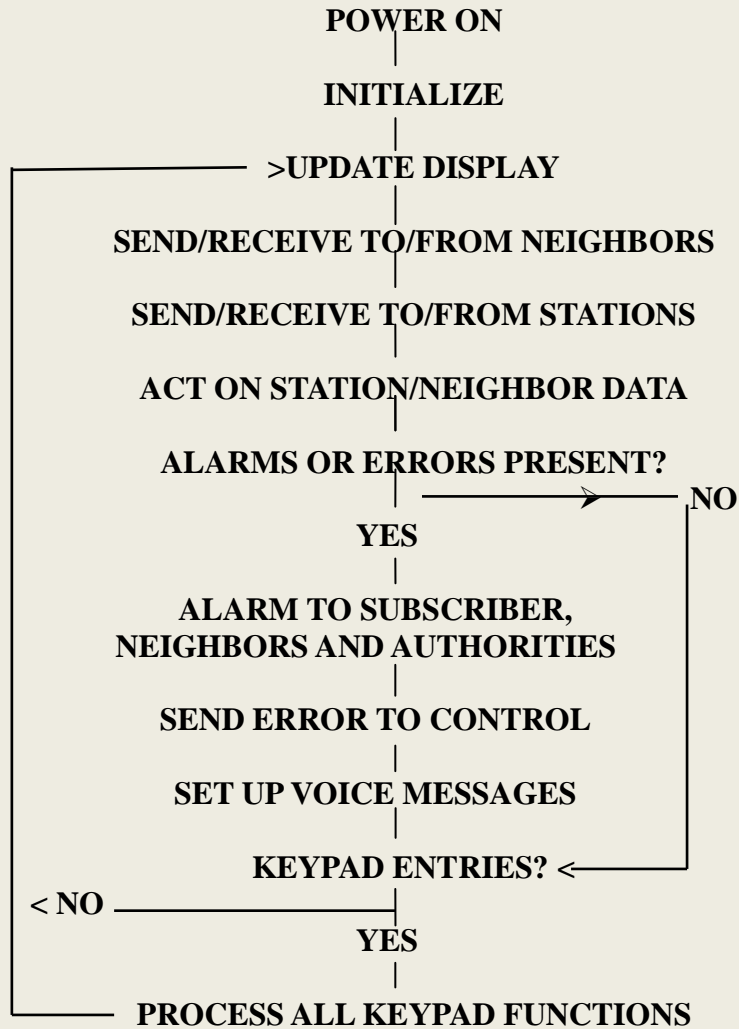
Audio instructions direct all required actions.

The system is always on. However, door and window intrusion may be suspended by entering the time at which the suspension will automatically end and when the next arming will begin. Audio warnings are voiced for five minutes when suspension is about to end.

If desired, a selection of one of five predetermined arming and suspension times may be made. These arming/suspension times are repeated each day without any entry needed. During suspension, an audio message is voiced when the door is opened to remind the subscriber that the alarms are suspended. This reminder may be silenced (or toggled) for two hours during heavy door traffic by pressing pb8.

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FLOWCHART OF BASIC SYSTEM OPERATIONS



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CONSOLE

Console display

An LCD (liquid crystal display) is included above the keypad which normally shows the current date and time on the top line. Only the tens and units of the year appear and only “A” or “P” appears rather than “am” or “pm”. The last character is an abbreviation of the day of the week where upper case “T” is for Tuesday and lower case “t” is for Thursday. Similarly, “S” is for Sunday and “s” is for Saturday. The date and time are updated continually from the internet or telephone for telephone only subscribers.

02/17/16 11:32:32AW

Console keypad

The console is designed to look and operate like a standard telephone keypad. It has the familiar keypad with twelve keys, from “0” to “9” and “*” and “#”. Keys 2 through 9 have the letters of the alphabet included with “Q” not shown but existing in its proper order as also the letter “Z”. Normally, keys are entered as numbers. In some instances, a function will call for an alphanumeric entry. quickly pressing the same key repeatedly will display the succession of alpha characters followed by the numeric character and sometimes followed by special characters. In most functions, “#” is an increase and “*” is a decrease. Holding “#” down for two seconds or no activity for one minute exits any function and returns to the base mode.

Base Mode

Base mode is with the display showing the date and time. When in this mode, “*”, followed by the code will clear the system of repeating voice messages and the display of alarms. Entering “#” plus code resets any existing alarm and those that may have been silenced by “*”.

Access Code

Accessing functions requires an access code. This code is set at the factory as keys 2468. The installer will help the home owner enter a new code which must be four digits and must not have sequential numbers. This code is very important and should be stored in a private place. A function is provided where the subscriber can enter a secret name allowing code recovery. The default secret name is NABORLINK and may be changed by the subscriber.

Manual Alarm Entry

Manual alarms may be entered in five ways:

Duress Alarm – Raising the last two digits of the code. “9” goes to “0”. 2468 would be 2479. This does everything the code does but also sends the “Duress alarm” to police and neighbors. This new code must be used until changed in the Setpoint function, Pb1. This is a silent alarm and cannot be detected by an observer.

Domestic Alarm – Lowering the last two digits of the code. “0” goes to “9”. 2468 would be 2457. This does everything the code does but also sends the “Domestic alarm” to police and neighbors. This new code must be used until changed in the Setpoint function, Pb1. This is a silent alarm and cannot be detected by an observer.

Duress Alarm, Simultaneous keys – Hold Pb0 down and press and release Pb2. It sends an immediate alarm to police and neighbors. This is a silent alarm and cannot be detected by an observer.

Domestic Alarm, Simultaneous keys – Hold Pb0 down and press and release Pb5. It sends an immediate alarm to police and neighbors. This is a silent alarm and cannot be detected by an observer.

Medical Alarm, Simultaneous keys – Hold Pb0 down and press and release Pb8. It sends an immediate alarm to the fire department and neighbors and the subscriber.

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Functions Accessed From the Keypad

Key 1 Setpoints

Used to access the Setpoint Functions. Pressing this key followed by the code shows the current function. These values may be observed but not changed (except for time entries and the code password) by the subscriber. Setpoint functions are as follows:

| # | <u>SETPOINT</u> | <u>ENTERED VALUE</u> | |
|----|---------------------------|----------------------|---|
| 01 | year | 2016 | Must enter four digits! |
| 02 | month | 01 | (01 to 12) Must enter two digits! |
| 03 | day of month | 01 | (01 to 31)) Must enter two digits! |
| 04 | day of week | 01 | (01 to 07)) Must enter two digits! |
| 05 | hour (military) | 01 | (00 to 23) Must enter two digits! |
| 06 | minute | 01 | (00 to 59) Must enter two digits! |
| 07 | change master password | xxxx | |
| 08 | change guard password | xxxx | |
| 09 | change code password | 2468 | (Access Code) (9999 initiates secret name to restore or change code |
| 10 | door intr sec | 60 | second delay for door |
| 11 | Audio Clock for the blind | | 1=hourly or manual, 0>manual onlyusing pb2 in base mode |
| 12 | telephone only | 00 | Telephone only systems = 01 (<u>Type-T</u>) |
| 13 | door int sensitivity | 15 | Intrusion sensitivity to changes (<u>Type-I</u>) |
| 14 | window int sensitivity | 04 | Attempted Intrusion limit (<u>Type-I</u>) |
| 15 | door intrusion limit | 04 | Attempted Intrusion limit (<u>Type-I</u>) |
| 16 | temp mode | 00 | 00 00=Fahrenheit, 01=Celsius |
| 17 | hyd dry auto | 00 | 00 manual dry run, 01=auto dry run (<u>Type-U</u>) |
| 18 | water dom | 01 | Utility day of month to report water (<u>Type-Y</u>) |
| 19 | power dom | 01 | Utility day of month to report power (<u>Type-Y</u>) |
| 20 | gas dom | 01 | Utility day of month to report gas (<u>Type-Y</u>) |
| 21 | smoke delay before alm | 09 | Entry*3 seconds before alarm to internet (<u>Type-S</u>) |
| 22 | attic fan on temp F | 116 | degrees Fahrenheit at which all attic fans turn on (<u>Type-S</u>) |
| 23 | attic fan off temp F | 110 | degrees Fahrenheit at which all attic fans turn off (<u>Type-S</u>) |
| 24 | attic fan on temp C | 47 | degrees Celsius at which all attic fans turn on (<u>Type-S</u>) |
| 25 | attic fan off temp C | 43 | degrees Celsius at which all attic fans turn off (<u>Type-S</u>) |
| 26 | arm set start 0 | 10:00 | Start times for arming and suspension (<u>Susp/Arm</u>) |
| 27 | arm set start a p 0 | pm | (These are default values and may be |

| | | |
|----------------------------------|-------|--|
| 28 susp set start 0 | 07:00 | changed to suit the subscriber's needs) |
| 29 susp set start a p 0 | am | For am/pm, the code for each is shown. Enter P |
| 30 arm set start 1 | 10:30 | or A when changing. 41=A, 50=P) |
| 31 arm set start a p 1 | pm | |
| 32 susp set start 1 | 08:00 | |
| 33 susp set start a p 1 | am | |
| 34 arm set start 2 | 09:00 | |
| 35 arm set start a p 2 | am | |
| 36 susp set start 2 | 12:30 | |
| 37 susp set start a p 2 | pm | |
| 38 arm set start 3 | 11:00 | |
| 39 arm set start a p 3 | am | |
| 40 susp set start 3 | 02:30 | |
| 41 susp set start a p 3 | pm | |
| 42 arm set start 4 | 01:00 | |
| 43 arm set start a p 4 | pm | |
| 44 susp set start 4 | 04:30 | |
| 45 susp set start a p 4 | pm | |
| 46 crystal_freq_error_correction | | |
| 47 hydration_sch_units | | Displays minutes assigned to each zone |
| 48 version Display | | Displays the type, version, manufacturing location and serial number |
| 49Visit Display | | Internet domain name and software and hardware title |

After pressing Pb1, selection of the desired setpoint may be reached by sequential pressing of Pb# to increase the setpoint number or Pb* to decrease, or by entering the two digit number from 01 to 49 to go directly to the desired setpoint.

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Key 2 Provides time and date for the blind in base mode. It may be activated manually or may be programmed to report once each hour using Setpoint 11 in Pb1 above.

Key 3 (Overlay shows HVAC)

Used to access control of the heating, cooling and humidity system. (Type-H)

Key 4 (Overlay shows HYDRATION) (Type-U)

Used to access and control the hydration system which is composed of the following functions:

Daily Watering (FUL)

Schedule up to 16 zones with no weekly restrictions.

Day of Week (DOW)

Watering schedule that resets on a selected day of the week.

Scheduled Hydration (SCH)

Where irrigation water is available, pressing PbS while in the HYDRATION MODE (Pb4 in base mode) will turn a pump on and follow a prescribed zone sequence for each entry in the schedule.

The hydration system includes an extensive pump control capability to perform this schedule function. Call your Control agent for specifications of this system

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Key 5 Exception Report (Not on Overlay)

Allows observation of all current exception reports. These reports show activities that may need to be reviewed during system operation. There are four lines for each report. Pb1 and Pb2 switch between each of the dual lines of the report. There is a maximum of 16 reports. Each report is also transmitted to Control when received for archiving.

Key 6 (Overlay shows SUSP/ARM)

The NABORLINK system is normally ARMED. This feature allows the subscriber to suspend door and window alarm reporting until a specified time at which the alarm reporting returns to armed. When in Arm mode, as the clock matches the hour, minute and the am/pm of the entered suspension time, the speaker voices "Alarms are suspended". When in Suspension mode, as the clock matches five minutes before the hour, minute and the am/pm of the entered suspension time, the speaker voices "suspension off warning" at each one minute point and when it reaches zero, the speaker voices "Alarms are now fully armed".

Susp/Arm sequences 0-4 are stored in the Key 1 Functions as default values but can be changed as desired. These sequences must be written down and posted near the controller to facilitate their selections and use. Pressing keys for selecting existing sequences will show both arming and suspension settings for the selection for two seconds. Then the display will ask "Selection OK? Yes or No". Pressing "Y" installs the displayed selection and then asks "Arm alarms now? Yes or No". Pressing "Y" will enter the armed mode and "N" will enter the suspension mode. **Key 7 (Overlay shows LIGHTING)**

The system includes a sophisticated lighting control system that can dim or turn lights on or off or position motorized windows or shades based on remote control, daylight, schedule or time.

(Type-L)

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Key 8 Used only for toggling voice reminders. As this key is pressed, the state of reminders is displayed as "on" or "off".

Key 9 Functions

This key is a portal to twenty two special functions that enable observation and/or control of these functions. They may be selected by entering the two digit function number (from the chart) or by using the "#" or "*" keys to search. The displayed "?" requires "PbY". They are as follows:

01 Test Main Keypad? Test Controller keypad

02 Reset Exception? Clear Exception Report (subscriber can observe only)

03 Display System Details? Display voltage and current of the wall transformer, battery, station, and the five volt supply, and the temperature of the controller circuit board. The G-R balance and the status of the controller lid whether open or closed.

04 Install New Station? Used by the installer to record the location of each station after installation. (subscriber can observe only)

05 Select Zones ON/Off? See the Hydration Station for details

06 View Station Values? View the returned values from each station in the system. See the details for each station from the index (stations)

07 Display Water Meter? See the Utility Station for details

08 Display Power Meter? See the Utility Station for details

09 Display Gas Meter? See the Utility Station for detail

S

10 Replace Battery? Prevents an alarm when replacing a battery

11 Internet Action OK? Subscriber must acknowledge reading of data and give permission for internal changes to be made from Contro

l

12 Display Station Location? Displays each of the installed stations and their location

13 Display Base Entries? Displays all of the Base Entries for this subscriber - Selection is made with “#” and “*” (subscriber can observe only) Control may request a verification if a neighbor has been added or changed

14 Xfer Sta Loc to Cont? If the Controller needs to be replaced, this function installs all locations stored in the stations into the controller memory

15 Station Leds On Off? When a station is installed, the station led begins flashing which indicates a successful installation. This function allows flashing to be turned on or off.

16 Test Voice? Allows the selection of voices in the speaker station to be heard. Enter the two digit station number (00-31, 99=all) and then NNN (000-125). Key 2 repeats the current voice selection. Key 3 allow the station number to be changed. “#” or “*” increment or decrement voices.

17 Set Voice Volume? Allows the testing and adjusting of the default voice volumes for individual stations or all (00-31, 99=all). Enter voice levels from 0 to 9

18 Calibrate System? Allow the automatic calibration of all magnetic door proximity sensors and door and window distance sensors. All doors must be closed and window areas cleared and moisture detectors dry for this calibration to be correct.

19 Read Memory? Allows the technician to read hexadecimal values directly from memory for maintenance.

20 Secret Name? Provides a method of restoring the subscriber code by allowing the entry of a “secret name” that can be accessed when the code is forgotten.

20 maximum characters. Default is “NABORLINK”

21 Edit hyd new lawn? Provides the editing of “New Lawn” watering schedule.

22 Hyd dry edit? Provides observation and actuation of the “Dry” watering deficits. Deficits are cleared during calibration and when the deficit run is completed.

Key * (Overlay shows CODE)

Used to leave and enter the home. When leaving the home, this key is pressed and the display asks for the code which, when correctly entered, begins a 60 second delay (programmable) for the subscriber to leave the home. During this period, the associated door may be opened and closed. When entering the

home, the voice says “If this is a real intrusion do not press any keys. Otherwise, enter star followed by your code to cancel”. After code entry, the same delay is initiated. If the delay expires without the code being properly entered, an intrusion alarm is initiated which notifies neighbors and police. The alarm may be cancelled at any time if a mistake has been made, hopefully before police or firemen arrive by pressing Pb# and the code. It is also used for silencing a “kitchen smoke alarm”, (Type-S)

If a smoke alarm is expired, pressing “#” asks for the subscriber code and then cancels the alarm by sending "Alarm Cancelled "to all of the recipients of the original alarm.

Key 0 (Not on overlay)

Used with other keys for simultaneous keys alarm entry and to hold the display on a real time reading from a selected station. In hold mode, an “H” is displayed between the date and time.

Key # (Overlay shows ALARM RESET).

In base mode, this key allows reset of alarms. Any alarm not cleared will begin again. Also used in conjunction with other programs. (See above for alarm cancelling)

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SECTION TWO

With the power of present technology, the microprocessors used in this system are capable of doing much more than the basic three protections. In the following pages, in addition to the basic stations, all of the currently available and future "value added" stations are described. They may be installed at the time of purchase or added at a later date. After a minimal installation fee, monthly cost of using these value added stations will not increase.



INTRUSION STATION OVER OUTSIDE DOOR DOOR STATION AND ARM/SUSPENSION REMINDER SMOKE AND SPEAKER STATIONS

**ABOVE ARE SAMPLES OF WORKING PROTOTYPES
STATIONS**

Type-A Ankle Bracelet

This station is under development. It's main feature will be the ability to track the location of a person under house arrest 24 hour a day within an exact area around a home without the expense of using a cell phone to monitor the current position or a call center since Control can automatically relay the excursion directly to the person's parole officer.

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Type-B Automobile

This station provides a detachable cable that connects to a sensitive vibration monitor. The monitor is held in place by a magnetic plate. When the plate is attached and the cable is plugged in, the station is activated. Deactivation is made from the controller. Disconnecting before deactivating the station or any motion of the vehicle will cause an intrusion alarm. The station also has the capability of turning on lights and sounding a horn.

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Type-C Window Grill

This station monitors the opened or closed status of grillwork over a window well, window or any other opening that allows access into the home. It uses an acceleration sensor for measuring static levels of gravitation.

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Type-D Door

These stations are installed inside over every outside door on the inside of the home. It includes a Hall Effect sensor which provides a static measurement of magnet field strength. The associated door has a magnet inserted just below the station. A small operating range allows the station to sense the position of the door and send this information to the controller. Wide range measurements indicate a system error and are reported to the controller as a station repair. Measurements between these two values indicate tampering and are reported to the controller as an intrusion.

Additionally, when intrusion, smoke, heat, natural gas, carbon monoxide, water alarms occur, the door is released (unlocked, doorbell led is flashing) allowing neighbors or emergency personnel to enter the home to deal with the emergency. A door bell may be attached to this station allowing speakers throughout the home to be notified of someone at a particular door. Also, a rapidly flashing led inside warns the subscriber in armed mode that the code must be entered before leaving and after entering. This led is off when in suspension mode.

Many communities require keys to be available when responding to a smoke alarm. Naborlink satisfies this requirement by releasing the doors as above.

To enter the home without a key, the doorbell pushbutton may be pressed, after one push to sound the door tone, and then repeatedly with the code numbers: two pulses for a "2", four pulses for a "4", etc. which releases the door for 30 seconds. The pushbutton led repeats the number entered: two flashes for 2, eight flashes for 8, etc. Rapid flashing occurs for a code error.

A loud tone is generated in the station if the door is opened during armed mode if the code has not been entered.

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Type-E Environmental

This station along with an outside weather station provides the values of outside and inside temperature, wind direction and gusting magnitude and amount of rainfall and ground moisture. It has the capability of delaying the hydration process if rain occurs. When this system is installed and weather sensors are added, complete operating instructions will be supplied.

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Type-F Power Consumption

This station connects to as many as four electrical appliances in each of 32 stations and measures the energy consumption of these appliances. Reading from multiple stations are assembled in the controller and made available to the subscriber.

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Type-G Garage

This station provides the status of the garage doors in a home and allows the controller to warn the subscriber and neighbors that the door is damaged or is open after 10:00 pm.

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Type-H HVAC

This station is under development

This acronym stands for Heating, Ventilation, and Air Conditioning.

This station is capable of maintaining home or room temperature by controlling the home furnace and air conditioner in an on/off mode or in a proportional mode to automatically maintain heating temperature to an adjustable value on the controller to within one degree Fahrenheit and cooling temperature to an adjustable difference above the heating temperature to within one degree Fahrenheit.

It also has the capability of controlling the temperature of individual rooms utilizing controller entries or individual room thermostats.

It also has the capability of controlling the humidity of an entire home or room by room to an accuracy of 5%RH. When this system is installed, complete operating instructions will be supplied.

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Type-I Intrusion

This station contains a distance sensor and is used on outside doors and windows. After calibration, these stations report any excursion from the initial calibration level. An excursion over the intrusion sensitivity voices "There is a presence" followed by the location of the door or window. The excursions must be continuous. If the number of excursions exceeds the door intrusion limit then an intrusion alarm is voiced followed by the location and is sent to police and neighbors. This alarm is continuous and can only be stopped with an alarm reset operation. It also includes a temperature sensor and a heater to maintain the station above freezing and to report heat in case of an external fire and a level sensor to sense tampering and a sensitive microphone to sense glass breakage or any vibration that indicates attempts to go through a wall of the home. Also included are two glass strip inputs to report glass breakage.

When the display for an intrusion station has been selected (Function 6), the display shows

| |
|--|
| 1 1/17/16 11:32:32AW I00DI01NE serial #.... |
|--|

the station type, number and location alternately with the measurement data:

| | |
|-------------------------|------------|
| 1 1/17/10 | 11:32:32AW |
| I00N TT PV DDD SX SY HF | |

where

| | |
|---------|-------------------------------|
| Type | I |
| station | 00 |
| command | N |
| TTT | Station Temperature in C or F |

| | |
|-----|---|
| PV | Present distance 0.00 to 3.00 for 0 to 5 feet |
| DDD | Distance limit 0.00 to 3.00 for 0 to 5 feet |
| SL | Station X setpoint/level-tamper sensing |
| SL | Station Y setpoint/level-tamper sensing |
| H | Heater on= H, or off=O (These outside stations are kept above 32F) |
| F | Temperature base “C” for <u>C</u> entigrade or “F” for <u>F</u> ahrenheit |

This station utilizes a laser distance measuring device that detects the distance an object is from the station, usually directly below it.

When the station is turned on, it uses the current distance of the sensor as a reference point for all subsequent measurements. Sending a Calibration signal from the controller also resets this reference point. See [Function 18](#). This allows any initial distance to be the starting point.

When a laser beam has been interrupted, the change in length is compared to the programmable “intrusion sensitivity” value in the setpoint menu and if greater than this value all speakers voice “There Is A Presence” followed by its location and starts a counter that counts how many consecutive three second intrusions have occurred. The counter resets if the intrusions are not consecutive. The counter is compared to the programmable “intrusion limit value” and if greater, it causes an intrusion alarm which is sent to neighbors and police and repeatedly voices the location of the alarm source. The alarm may be silenced by entering Pb# plus code in the base mode. If multiple non sequential attempts occur, an alarm also occurs

Type-J Coherency
This station is under development

It will provide a wearable device for a person in need of constant observation. The person must press a button on the device at least once within each fifteen minutes. Failure to do so sends an alarm to neighbors and first responders. The device is programmed with a variable audio recording of family members that sounds every fifteen minutes with a kind greeting followed by reminding the person to press the button. When this device¹ is installed, complete operating instructions will be supplied.

Type-K Inside Air Quality (O2, NAT GAS, CO, RADON)
This station is under development

It will provide continuous monitoring of oxygen, natural gas, carbon monoxide and radon gas in the vicinity of each of these stations. It will also record and report low level accumulation of these gases. When this system is installed, complete operating instructions will be supplied.

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Type-L Lighting

Included in the project is a complete selection system that allows the subscriber to control lights, window shades, window openings or any other device that can respond to a digital signal from the controller.

This feature is in addition to the security system and may be installed along with the security system or added at a later date.

The system has a capacity of 64 drivers with eight drivers in each of eight stations. It operates from a driver locator chart that identifies a driver with a key sequence. This chart will be provided by the installer.

To program this system, press **Key 7** from the master keypad. The display reads:

| |
|--|
| NABORLINK LIGHTING Enter C, L, I or T |
|--|

If the lighting system has been activated, you may begin pressing table keys to turn lights or other connected devices partially or full on and off.

1. Press 'C' (pb2) to turn all drivers off.

2. Press 'L' (pb5) to manually turn drivers on and off.

Follow this with two numbers (NN) from 00 to 63 for the desired driver.

Follow this entry with two digits, 00 to 99 for percentage illumination.

'00' would set the output to zero. '99' would be full on.

If the load does not have a percentage capability (dimmer) such as a light intensity control, the output will be full on for any percentage above zero.

LNN99 will turn driver NN full on.

LNN50 will turn driver NN on at 50% if it has a dimmer or full on if not.

3. Press 'I' (pb4) to assign automatic drivers that turn on and off based on an input.

This feature can set lights to go on or off based on the input from a photocell measuring outside light level or it can open or close draperies or blinds based on sunlight.

It may also respond to the internet or a wireless remote.

Follow this with NN followed by 'P' (pb7) followed by '1' to '3' for one of three photo cell inputs.

Then enter '0' to follow the input or '1' to inversely follow the input. Or, enter 'M' (pb6) followed by '1' to '3' for one of three remote

control inputs to toggle the assigned driver on and off when the

corresponding remote is activated. Entering '0' clears all photocell or remote inputs.

INNP2 will allow driver NN to inversely follow photo cell #2

4. Press T (pb8) to assign a driver to go on or off at a fixed hour and day of week. (TNNHHFD)

Follow this with a driver by entering 'NN' from 00 to 31.

Follow this with 'HH' for the military hour (00 to 23) at which time the selected output will go off or on.

Follow this with 'F' (0 or 1) to turn the driver off at the selected hour or '1' to turn it on.

Follow this with 'D' (0-9) for day of week control.

0 = every day

1 -7 are Sunday through Saturday

8 = every even day

9 = every odd day

For example, TNN0000 would be off every day at midnight,

TNN0113 would be on Tuesday at 1 AM,
TNN1309 would be off on odd days at 1 PM,
TNN1211 would be on Sunday at noon, etc. where NN is the selected output driver.

In any of the menus, pressing “#” increments the driver and
“*” decrements the driver.

To save settings, hold “#” down until the system reverts to the
main menu. The lighting system will now operate as programmed.
Press “*” to exit without saving.

Drivers may be programmed from any controller and may also be set on or off.

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Type-M Future

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Type-N HOH (Hard of hearing)

This station provides a mechanical bed vibrator and flashing lights for those who are hard of hearing to warn them of alarms and to direct them to look at the nearest display for the type of alarm and the action to take because of the alarm.

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Type-O Outside Air Quality (Biological, Radiation, Noxious Gases)

This station is under development

This station is mounted outside the home and provides continuous monitoring for the presence of these gasses to prevent mass civilian exodus. It is reported to authorities and the speakers advise the family to leave immediately or go to a safe room and wait for an “alarm canceled” message. (See references)

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Type-P Heat Register

This station is under development

Automatically control heating, cooling and humidity in individual rooms

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Type-Q Speaker

The speaker station receives requests to voice certain pre-recorded phrases from the controller, from other stations and from the internet and are used to indicate, by voice, the actions required for each of the indicated conditions. They can be heard using Function #16 and the volume for all stations or any single station where a sleeping child may be. Refer to the console. It is recommended that these voices be listened to often enough to become familiar with them and to know what is expected from the subscriber.

EXPLANATION OF VOICE MESSAGES

Attempted Intrusion-A laser beam has been interrupted, a door has been opened exceeding the time limit or the magnetic field strength has been compromised. For laser beams, a voice announces “There is a presence” followed by the location but it does not alarm until four consecutive alarms occur. (Programmable) See . Type -I Intrusion (The sensitivity of this alarm is also programmable.)

Domestic Alarm-A Special key sequence has been entered on any keypad. This sequence can be any of the following:

- The “0” key is held down while pressing key ”5.
- The last two digits of the subscriber code are decreased by one. (1248 to 1237) In this case, the new code remains until the code is accessed in Pb1 (change code pswd). There is no indication in the home that this alarm has been sent. This feature brings help when one family member is being abused by another family member. It is sent to neighbors and police.

Station no response- A station has not responded to the controller after five tries. This alarm is considered a major fault and neighbors, police, and firefighters are notified.

Home Confinement Alarm- A family member who has an ankle bracelet has moved beyond the required limits. This is reported only to Central which will automatically report it to authorities.

Radiation Alarm-Excessive radiation has been detected outside of the home. The alarm is sent to authorities and the speakers advise family members to go to a sealed safe room to wait for an all clear voice message from the speakers.

Duress Alarm-A Special key sequence has been entered on any keypad. This sequence can be any of the following:

- The “0” key is held down while pressing key ”2”.
- The last two digits of the subscriber code are increased by one. (1248 to 1259) In this case, the new code remains until the code is accessed in Pb1 (change code pswd). There is no indication in the home that this alarm has been sent. This feature helps protect from forced code entry by an intruder. It is sent to neighbors and police.

Refrigeration/water Alarm-A monitored freezer or refrigerator or moisture sensors in the home is above or below the required limits or moisture is sensed. It is sent to the subscriber and neighbors only.

Garage Alarm-A monitored garage door is open after 10 p.m. It is sent to the subscriber and neighbors only. It also reminds the subscriber during the day if the door is open. The reminder can be silenced for two hours using the toggle feature of Pb8.

Heat Alarm-A smoke or distance sensor has detected heat above required limits. It is sent to the nearest fire station and neighbors and the speakers advise family members to leave the home immediately. Speakers in neighbor homes advise them to help if they are trained do so. The voice messages include the location where the alarm was initiated. The firemen are also given the gps home location and an outline of the home and floor plans and the location of the nearest fire hydrant.

Intrusion Alarm-The Attempted Intrusion alarm has occurred four consecutive times. It is sent to the

police and neighbors and speakers advise family members to go to a safe room and await help. Speakers in neighbor homes advise them to help if they are trained to so. The voice messages include the location where the alarm was initiated. The police are also given the gps home location and neighbor information.

Telephone Line Fail-(Telephone only subscribers) The telephone line is not functioning due to a possible break in attempt by cutting or shorting the telephone line. It is sent to Central who notifies the police and neighbors. Speakers advise family members to go to a safe room and await help. Speakers in neighbor homes advise them to help if they are trained to so. The voice messages include the location where the alarm was initiated. The police are also given the gps home location and neighbor information.

Medical Alert-The The “0” key is held down while pressing key ”8” to indicate that a family member needs medical help. It is sent to neighbors and fire fighters as CERT responders.

Cognitive Alarm-A family member who is wearing a cognitive monitor has failed to enter a requested periodic response. It is sent to neighbors and fire fighters as CERT responders. Cognitive monitors are available from your NABORLINK AGENT.

No Alarms-No alarms are present. It is sent once each minute to each neighbor as an all clear signal. If this is not received within the programmed limits, the alarms below are sent to the police and neighbors

No Answer North-The north neighbor has failed to send the one minute all clear message. If this is not received within the programmed limits, the alarms below are sent to the police and neighbors

No Answer South-Similar to above for the south neighbor.

No Answer East-Similar to above for the east neighbor.

No Answer West-Similar to above for the west neighbor.

This Is Only a Test-Sent to neighbors When testing sensors in each home. It prevents any action to be taken.

Smoke/Heat Alarm-A smoke or distance station has detected smoke or heat. It is sent to the nearest fire station and neighbors and the speakers advise family members to leave the home immediately. Speakers in neighbor homes advise them to help if they are trained to so. The voice messages include the location in the home where the alarm was initiated. The firemen are also given the gps home location and an outline of the home and floor plans and the location of the nearest fire hydrant.

System Alarm-A system alarm has occurred. This alarm is sent only to Central where action will be taken to determine the cause and correction.

Sensor Repair-A sensor repair alarm has occurred. This alarm is sent only to Central where action will be taken to determine the cause and correction.

Tornado Warning evacuate to the (north:south:east:west)- This alarm is received from the National Weather Service. It will warn of tornadoes and suggest an evacuation route. See Scenario #5.

Alarm Canceled-The “ALARM CLEAR” key (Pb#) has been pressed followed by the subscriber code. This signals that the previous alarm has been canceled. It is transmitted to the same agencies as the previous alarm.

Weather Warn check TV and radio – This alarm is received from the National Weather Service. The

media may warn of tornadoes or floods and suggest an evacuation route.

Neighborhood Warning-This alarm is sent by the police and indicates an imminent threat of neighborhood criminal activity. In increase of diligence is suggested or going to the safe room until an alarm cancelled has been received.

Inside Air Alarm-There is a dangerous level of Carbon Monoxide or Natural Gas or Radon gas in the vicinity of the reporting station. This alarm is sent to neighbors, police and firemen. Neighbors are advised to turn gas off before helping with evacuation.

Outside Air Alarm-Excessive levels of biological, radiological, or noxious gas has been detected outside of the home. The alarm is sent to authorities and the speakers advise family members to go to a sealed safe room to wait for an alarm cancelled message from the speakers.

Automobile Alarm-An intrusion has occurred in the area of parked cars that have an intrusion pad installed. It is sent to the subscriber, neighbors and police. These automobile intrusion pads are available from your NABORLINK AGENT.

The following voice messages are used for alarm source indicators and instructions for certain Special alarms. They are also used in the concatenation of words to make a variable instruction:

*"zero", "one", "two", "three", "four", "five", "six", "seven", "eight", "nine",
"ten", "twenty", "thirty", "forty",
"a", "b", "c", "d", "e", "f", "g",
"kitchen", "inside", "window", "door",
"basement", "main floor", "upstairs", "third floor", "fourth floor",
"north", "south", "east", "west", "center",
"out building", "building attic",
"north neighbor's home", "south neighbor's home", "east neighbor's home", "west neighbor's home",
"this building", "apartment",
"Alarms are armed", "Alarms are suspended", "Minute suspension warning"
"Please enter "*" then your code to cancel pending alarm",
"Minutes", "Hours", "Thank You",
"Telephone line will be tested in one minute.
 Do not use the telephone for two minutes",
"Verify problem as instructed.
 From a distance, write down all you see and hear.
 Help if you have been trained to do so",
"Take a fire extinguisher and help if you
 have been trained to do so",
"Police and neighbors have been notified.
 Go to your safe room and await help",
"LEAVE BUILDING NOW",
"Turn Gas off in neighbor's home first
 then help them evacuate
 then clear the area and wait for help",
Lights", " Shades", " are on", " are off", " are open", " are closed", " Calibration required", " All",
 " Close door, alarm in..", " Seconds".*

End of messages [Return to Table of Contents](#)

Type-R Refrigeration and Water Leakage

This station monitors refrigerators and freezers for correct temperature ranges and will notify the subscriber and neighbors if there is a problem. It also senses moisture in selected areas of the home such as kitchen and bathroom sinks and toilets and clothes washers. Provision is also made to turn the home water off and clothes washer power off in the case of water leaks.

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Type-S Smoke

This station is placed in the nine volt battery compartment (in place of the battery) of a standard UL approved Kidde Smoke detector. It includes a temperature sensor for sensing heat that may be generated without smoke. It monitors the circuit that measures ionization current from the radioactive element in the detector and predicts the end of life of this element. It responds without modification to the current caused by the smoke alarm when smoke is detected.

The controller has the ability to turn the smoke detector off. When smoke originates in the home, it fills the whole house with smoke and it is not possible to tell where the smoke originated. The NABORLINK system turns all of the alarms in the home off except the one in the room of origination. This room remains on thereby allowing the shrill detector alarm to direct firefighters to this room. Speakers in other rooms in the home are announcing the location of the smoke or heat alarm and advising family members to leave the home. Any attic fans are turned off.

There is a delay from the beginning of the alarm and the transmission of the alarm to the internet. This delay is programmable (Setpoint #14, "Smoke delay", default value is 39 seconds) so that, if the smoke originates in the kitchen (burned toast) or any other room in the home and is not a threat to safety and can easily be extinguished, pressing "Pb*" followed by the code and may be entered on any console. This will silence the audio alarm, send an alarm cancellation, turn off all the smoke detectors and test every two minutes to determine that all of the smoke has cleared. If not cleared in thirty minutes, the smoke alarm comes on again.

This station can also administer retardant powder, water, or co2 to put out any flame that may exist. It can also turn an attic fan on and off according to temperatures programmed in the controller.

(See attic fan on temp F)

Type-T Future

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Type-U Hydration

Hydration indicates applying moisture to designated areas which may include lawns, shrubs, or any growing entity. It allows convenient control over 16 zones (groups of sprinklers) without installing external controllers.

Simple valve driver boxes are installed in areas close to valve locations and connected to 24VAC power through isolated solid state drivers. This power supply has the capacity to run two solenoids at one time.

This feature is in addition to the security system and may be installed along with the security system or added at a later date. The system has a capacity of 16 zones. Watering times may be applied to all zones or may be applied to individual zones. A zone may be as small as one valve driving one sprinkler or as

large as one valve driving many sprinklers.

Once a hydration program is set in operation, the display in base mode will show that program as Pending”.

SETTING UP THE SYSTEM

This system is operated from the main keypad only. After each selection, the code must be entered. Press Key 4. The display will show:

Hydration status: SSS
Enter 1-7,B,E,F,S

A single key (alphanumeric) selects the following modes:

("SSS" becomes one of the following status modes)

= 1 – 7 SUN, through SAT for weekly FUL waterings that reset on the day shown

= B – Activates both SCH and FUL and shows as BTH .

= F – FUL, Normal watering schedule ignoring week days

= S – SCH, Water master (irrigation) schedule. Immediate SCH start

= E – OFF, Hydration System Off

Pressing alphanumeric pb1 for “SUN” through pb7 for “SAT” or “F” for “FUL” displays:

Hydration status: FUL
Exit (N) or Edit (Y)

Pressing (N) exits the edit program with FUL, SUN - SAT in pending mode

Pressing (Y) displays:

FULL HYDRATION EDIT
Ent # of zones: ZZ

Where “ZZ is the current number of installed zones. Enter “#” if this is still the desired number of zones or enter a new number of zones from “01” to “16”. Then the bottom display will show:

.....

FULL HYDRATION EDIT
Ent# days btwn:b #=b

where “b” is the current number of days between waterings.

Enter “#” if this is still the correct number of days or enter “1” through “6”.

The displays will then show:

Z01 DAYS=b ZONES=zz
DUR=hh:mm BEG=hh:mma

Then do the following steps:

Enter “#” to step through and observe all of the current settings or enter a new watering duration in hours. “hh” and minutes, “mm” for this beginning zone followed by the start hours, minutes, and “a” or “P” for AM or PM. The program then automatically sequences to zone 02 and creates the start time for

zone 02.

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Enter pb pound to enter the next duration or pb star to return to the previous zone. Or, enter a new watering duration for this zone.

Repeat step 2 until the entire schedule is as desired. When the schedule is complete, an extra display shows the stop time of the last zone

Hold pb pound down until the system reverts to the main menu. The hydration system will now function as programmed beginning with zone 01 at the beginning time on the day of programming if the time is earlier than the selected time. Otherwise, it will begin the next day.

If “F” was entered, the system will operate just as programmed above with hydration occurring after each cycle of days determined by the days between entered above. This method is called day by day and does not reference the calendar week days.

If “1” (SUN) through “7 (SAT) was entered, a weekly schedule is selected that resets at the selected day of the week and repeats the series each week,

For example, if two days between watering has been chosen and SUN is selected, the watering schedule will be SUN, WED, SAT. If one day between watering has been chosen and MON is selected, the watering schedule will be MON, WED, FRI, SUN.

.....
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Select “NEW” from Function 26. Displays

| |
|---|
| NEW LAWN WATERING Zzz Sssa Dhhmm Bw Wn |
|---|

where Z=zone number zz, (zz=01 to 16)

S=start hour ss, a=a or p for am or pm. (ss=01a to 12p)

Dhhmm=hours and minutes to water (hh=00 to 09, mm=01 to 59)

Bw=wait hours between waterings. (w=1 to 9)

Wn=number of waterings per day. (n=1 to 9)

A zero for n turns this feature off.

Enter the appropriate value in each of the cursor locations.

If an error is made, press pb star or pb pound to start over.

The selected zone will now turn on at Sssa hour for hhmm hours, minutes every w hours for n times.

For example, selecting a start hour of 0600a, a duration of 20 minutes every 2 hours 7 times per day functions as follows:

On at off at

6:00am 6:20am

8:00am 8:20am

10:00am 10:20am

12:00pm 12:20pm

2:00pm 2:20pm

4:00pm 4:20pm

6:00pm 6:20pm

**This feature operates independently of the main hydration system.
This feature will not run during regularly hydration schedules.
Press pb pound and hold until program reverts to normal operation.**

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**Pressing “S” begins the irrigation schedule immediately
from the NABORLINK irrigation program.
Change the default for “Change minutes/unit”, the number of minutes to each unit if desired.
The default is 60 minutes. A unit is the entry number times the units for each zone.**

Complete plans for a pumping system are available from your control group.

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**Running the “DRY” hydration feature. Select from Function #22.
It displays a menu to observe the number of three second intervals in which the sump water was too low
to pump. The make up runs when “Run now?” is selected and continues until all of the zones have been
restored.**

TURNING SELECTED ZONES ON AND OFF MANUALLY (select from Function, Pb5)

**This feature operates independently of the main hydration system.
This feature will not run when regularly hydration schedules are running.
It is accessed from the function menu, pb 9, function 05, “hyd_manual”.**

Manual Zone Control
All zones are off

Then the display will show.

Manual Zone Control
Zzz Zone is Off

If any zone is on, the display will show:

Manual Zone Control
Zzz Zone on 60 min

Enter Pb# to select the next zone or PB* to move to the preceding zone.

Enter Y (pb9) to turn the zone on with a 60 minute default on time, N (pb6) to turn the zone off.

The display will reflect the current state.

Pressing Pb1 to Pb4 sets a 60, 120, 180, 240 minute run time.

Press pb pound and hold until program reverts to normal operation.

Re-entering this function with a zone running will show the remaining run time.

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Type-W Future

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Type-X Pedestrian

This station is installed on the outside of the home facing the street. It responds to a pedestrian in distress who has pulled a loop on a belt. Neighbors and police are immediately notified to assist in this location. This station is designed to rescue children who are on the way to or from school and being accosted by strangers but will be helpful for anyone walking alone and is accosted. This signal locks on and will alert any home the wearer is passing if an abduction is successful thereby providing an automatic trace of a vehicle's movement. This is a very useful station but requires many systems to in operation to be successful.

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Type-Y Utility

This station will measure the amount of each utility as it is used by the subscriber. It does this by observing the fastest moving element on the meter face. It provides for a current readout, resetting to the current reading and sending the reading over the internet to the utility for billing at the day of the month indicated in the setpoints.

It allows the homeowner to manually reset the readings to the current utility display.

| |
|--|
| Disp/Change Utility Water Water Read 00000000 |
|--|

| |
|--|
| Disp/Change Utility Gas Gas Read 00000000 |
|--|

| |
|--|
| Disp/Change Utility Power Power Read 00000000 |
|--|

This display for water, gas, or power allows the subscriber to observe and reset the reading to agree with the actual reading on the meter itself. These are accessed through Function 7, 8, and 9.

In addition, the DOM (Day of month) to report the reading to the utility and the MAC address for the utilities are recorded in the Setpoints directory and the EMAC directory respectively. They can be viewed but only changed from Control.

A Special feature is the ability to detect leaks in the utility lines by expecting at least one zero flow in any 24 hour period. If this does not occur, an alarm is sent to the subscriber and neighbors so that corrections

can be made.

This system consolidates the meter reading process and reduces the manpower needed to read meters.

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Type-Z Future

SECTION THREE

Summary

In view of the antiquated and unreliable equipment being sold today, mostly for profit and not to provide a service, it should be refreshing to know that there is now a system that will satisfy a real need in society. Not only will it provide protection against home invasions and fire but will connect a community and promote the natural desire of mankind to help his neighbor. It has been said by many experts that home security will never be viable until neighbors get involved.

With the highly reliable electronics available today, why not apply it to home security where it can revolutionize and bring this protection and community involvement into the twenty first century? Similar to cell phones, with all of their wonderful (but sometimes useless) “APPS”, NABORLINK provides apps for every useful need in the modern home.

It is expected that cell phones will be a major factor in NABORLINK systems as cell phone technology embraces the internet of which NABORLINK is deeply involved. The present development of NABORLINK technology is aligned with the future by providing any connectivity that can be imagined for these developments.

One of the interesting “APPS” that is included in NABORLINK is the freedom to use the included Lighting Station to connect to the future development of wireless remote control for existing wall switches and outlets that will provide unlimited variety in the way lighting, shades and windows will be used.

The same is true for all of the future stations which NABORLINK is designed to accept such as medical pendants that not only provide for conscious falls but for unconscious falls and nighttime monitoring. Another is the Home Confinement Station that will change the way prisoners will be held at home. Please refer to the [Reference Section](#).

Of special interest is the Outside Air Quality Station that is expected to be available soon that will economically provide detectors for every home in the United States to completely deter terrorist desire to set off “dirty bombs” since NABORLINK will quickly provide Homeland Security and subscribers with radiation concentration, dispersion and strength information to potentially prevent the mass exodus of entire cities when this information allows homes to remain occupied until the threat has dissipated. The same is true for the Inside Air Quality Station that will help prevent explosions caused by leaking natural and bottled gas and by monitoring for impure air in the home. . See “Dirty Bomb” in [references](#).

These and other stations described above make NABORLINK an unrivalled bargain since these “APPS” can be inexpensively installed without any additional monthly fees

The developer of NABORLINK Security Network fully intends it to be a service dedicated to the safety, comfort and well being of all of its subscribers with little regard for the “bottom line” that drives most businesses. All of our subscribers will be special and deserve to be secure in the knowledge that “you are never alone with NABORLINK” and the comfort in knowing that your home will always

- *have 24/7 freedom of movement in the home*
- *be safe from uninvited visitors*
- *have trained neighbors that care*
- *have the fastest response possible to emergencies by police and fire departments*
- *be free from fees for false alarms due to faulty equipment or lack of customer training*
- *be well acquainted with their neighbors so that there well never be a question of who can enter a home in the Naborlink name.*

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This URL has much useful information for comparison with NABORLINK

https://en.wikipedia.org/wiki/House_arrest

Internet search for “Alarm Company Complaints”

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<http://www.pbs.org/wgbh/nova/dirtybomb/ferg-030305.html>

<http://nvfc.org/>

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SECTION FOUR
QUESTIONS AND ANSWERS

WHAT IS THE DIFFERENCE BETWEEN ANALOG AND DIGITAL (SWITCH)

SWITCHES CANNOT BE MONITORED FOR CORRECT OPERATION. THERE IS ALWAYS THE POSSIBILITY OF AN UNDETECTED FAILURE.

ANALOG SENSORS ARE CONTINUOUSLY MONITORED FOR CORRECT OPERATION AS WELL AS FOR ALARM INFORMATION. SENSOR FAILURES CAN BE FIXED BEFORE THE SUBSCRIBER KNOWS THERE IS A PROBLEM.

INTERNAL VS EXTERNAL INTRUSION SENSORS

INTERNAL SENSORS NOTIFY THE SUBSCRIBER THAT SOMEONE IS ALREADY IN THE HOME OR BUSINESS BEFORE DEFENSES CAN BE SET UP.

EXTERNAL SENSORS PROVIDE A WARNING THAT SOMEONE IS ATTEMPTING A BREAK IN ALLOWING PRECIOUS TIME TO SET UP A DEFENSE SUCH AS GOING TO A “SAFE” ROOM WHILE HELP ARRIVES.

WHAT HAPPENS IF THE TELEPHONE LINE IS CUT OR IF ELECTRICAL POWER IS REMOVED FOR TELEPHONE ONLY SUBSCRIBERS?

WITHOUT A TELEPHONE LINE THE CALL CENTER CANNOT BE CALLED AND WITHOUT POWER, AC ALARM BELLS (USUALLY IGNORED) CANNOT WORK

THE NABORLINK SYSTEM CONSTANTLY SENDS AND RECEIVES DATA OVER THE TELEPHONE/INTERNET TO NEIGHBORS AND THE CENTRAL CONTROL. IF THE TELEPHONE LINE IS DAMAGED OR CUT OR IF THIS DATA PROCESS IS INTERRUPTED, POLICE AND FIRE OFFICIALS ARE NOTIFIED ALONG WITH CENTRAL CONTROL WHO WILL QUICKLY VERIFY THE PROBLEM AND NOTIFY POLICE AND FIRE OFFICIALS AS TO ITS IMPORTANCE.

DO I HAVE TO TURN THE NABORLINK SYSTEM ON AND OFF?

NO! THE SYSTEM MAY BE SUSPENDED BUT IT TURNS BACK TO ARMED BY ITSELF. YOU NEVER NEED TO WORRY ABOUT FORGETTING TO TURN THE SYSTEM ON TO PROTECT YOUR HOME OR BUSINESS.

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HOW EASY IS THE NABORLINK SYSTEM TO USE?

IT IS VERY USER FRIENDLY!

ONLY ONE CODE IS REQUIRED TO BE ENTERED ON A TELEPHONE TYPE KEYPAD AFTER YOU ENTER OR BEFORE YOU LEAVE YOUR HOME. PRESSING ONE PAIR OF THREE PAIRS OF KEYS IS A SILENT ALARM.

SUSPENDING ALARMS FOR DOORS OR WINDOWS IS DONE BY SIMPLY ENTERING A PASSWORD AND THEN THE TIME FOR THE SUSPENSION TO START AND THE ARM TO START. OR, A SIMPLE KEY SEQUENCE THAT SELECTS A PRESET ARM/SUSPENSION TIME

WHAT ABOUT RADIO FREQUENCY SYSTEMS AND CELL PHONE BACKUP SYSTEMS?

THERE IS AN INEXPENSIVE ILLEGAL DEVICE AVAILABLE THAT WILL JAM EITHER OF THESE EXPENSIVE SYSTEMS AND IS WIDELY PURCHASED.

THE NABORLINK SYSTEM IS UNAFFECTED BY THESE DEVICES OR BY ANY JAMMING OR HACKING METHOD. ATTEMPTED HACKING IS REPORTED TO FEDERAL AUTHORITIES!

ARE THERE BATTERIES TO REPLACE IN THE NABORLINK SYSTEM?

THERE IS ONLY ONE BATTERY IN THE NABORLINK SYSTEM AND IT IS IN THE CONTROLLER. IT IS CONSTANTLY MONITORED FOR CAPACITY AND FUNCTION. WHEN BATTERY REPLACEMENT IS REQUIRED, A MESSAGE IS AUTOMATICALLY SENT TO THE REPAIR SERVICE AND THE BATTERY IS SENT TO AND REPLACED BY THE SUBSCRIBER WITHOUT CHARGE.

WHAT HAPPENS WHEN A SENSOR FAILS?

ALL SENSORS ARE CONTINUALLY MONITORED FOR QUALITY AND FUNCTION. IF A SENSOR BEGINS TO FAIL, A MESSAGE IS SENT IMMEDIATELY TO THE REPAIR SERVICE. REPLACEMENTS ARE MADE IN THE SHORTEST TIME POSSIBLE.

ARE NEIGHBORS REQUIRED TO HELP AND ARE THEY LIABLE IF SOMETHING GOES WRONG?

UNDER "GOOD SAMARITAN" LAWS, THESE NEIGHBORS HAVE NO LEGAL REQUIREMENT TO HELP AND CANNOT BE PROSECUTED IF THEY FAIL TO RESPOND OR MAKE MISTAKES IN TRYING TO HELP.

THEIR PRESENCE INCREASES THE PROBABILITY THAT ALARMS MAY BE QUICKLY DEALT WITH.

NEIGHBORS ARE SPECIALLY TRAINED BY THE CERT PROGRAMS TO BE EFFECTIVE IN MANY SITUATIONS. See references

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IS THERE A VOICE LINK BETWEEN HOMES?

NO! ONLY DIGITAL DATA IS TRANSMITTED THROUGH THE INTERNET BETWEEN NEIGHBORS. VOICE MESSAGES ARE PRERECORDED IN EACH HOME AND SELECTED TO BE HEARD BASED ON THE DIGITAL ALARM DATA.

WHAT ABOUT KITCHEN “BURNED TOAST” SMOKE ALARMS?

WHEN ANY SMOKE ALARM OCCURS AND THE SUBSCRIBER IS PRESENT, A TWENTY NINE SECOND PERIOD ALLOWS PB* PLUS THE CODE ON ANY KEYPAD TO BE PRESSED WHICH SUPPRESSES SMOKE ALARMS IN ALL ROOMS IN THE HOME UNTIL ALL OF THE SMOKE ALARMS ARE OFF. OF COURSE, IF NO ONE IS HOME, IT IS A REAL, REPORTABLE FIRE.

THE HEAT ALARM IS ALWAYS ACTIVE.

HOW LONG DOES IT TAKE TO INSTALL A SYSTEM IN AN AVERAGE HOME AND WHAT IS THE COST?

USING MODERN QUICK CONNECT METHODS, THE INSTALLATION TIME SHOULD BE LESS THAN THREE HOURS.

WHOLE HOUSE PROTECTION WOULD COST ABOUT THE SAME AS CURRENT MINIMUM SYSTEMS BUT TEN DOLLARS PER MONTH. THIS FEE PROVIDES FOR LIFETIME REPAIR AND REPLACEMENT IN THE UNLIKELY CASE OF EQUIPMENT FAILURES.

WHAT IS THE RELIABILITY AND REPAIR GUARANTEE OF NABORLINK?

THE KEYPAD IS THE ONLY DEVICE THAT HAS MOVING PARTS AND HAS A THREE MILLION OPERATION PER KEY LIFETIME. ALL OTHER COMPONENTS ARE SOLID STATE. THE MTBF (MEAN TIME BETWEEN FAILURES) FOR THESE COMPONENTS IS GREATER THAN 100 YEARS.

NABORLINK COMPONENTS ARE GUARANTEED WITH FREE REPLACEMENT FOR AS LONG AS THE SYSTEM IS ACTIVE AND HAS NOT BEEN ABUSED. AFTER TEN YEARS, THE SUBSCRIBER PAYS A SMALL CIRCUIT BOARD EXCHANGE FEE.

SMOKE DETECTORS AND BATTERIES ARE REPLACED FREE. ALL ARE SUBSCRIBER REPLACEABLE.

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WHAT TYPES OF SENSORS ARE USED IN NABORLINK?

INTRUSION SENSORS ARE INFRARED DISTANCE MEASURING DEVICES CURRENTLY MANUFACTURED BY SHARP.

SMOKE SENSORS ARE CONVENTIONAL. UL APPROVED KIDDE SMOKE DETECTORS WITHOUT MODIFICATION. A CONNECTION IS MADE THAT MEASURES THE IONIZATION CIRCUIT CURRENT. INCLUDED IN THIS SMOKE SYSTEM IS A HEAT SENSOR.

VIBRATION SENSORS CONSIST OF A DUAL PLANE ACCELEROMETER MADE BY ANALOG DEVICES THAT RESPONDS TO ANY ATTEMPT TO GO THROUGH A WALL OR TO BREAK A WINDOW. IT ALSO INDICATES ANY VIBRATION IN THE BUILDING ITSELF THAT EXCEEDS PROGRAMMED LIMITS.

BESIDES SECURITY, WHAT ELSE CAN BE MONITORED OR CONTROLLED?

"SMART HOME" AND INDUSTRIAL FEATURES MAY BE APPLIED UNDER SUBSCRIBER PROGRAMMED CONTROL

PENDANT COGNIZANT ALARMS THAT REQUIRE A PERIODIC RESPONSE

HOUSE ARREST ANKLE BRACELET ALARMS THAT REQUIRE A 24/7 RESPONSE

HOME OR BUILDING HEATING, COOLING, HUMIDIFICATION AND

DEHUMIDIFICATION

SCHEDULED 365 DAY LAWN WATERING AND MOISTURE

LIGHTS AND APPLIANCES

SUMP WATER LEVEL DETECTORS, MOISTURE SENSORS FOR CRITICAL, UNATTENDED AREAS SUCH AS BEHIND CLOTHES WASHERS, UNDER DISH WASHERS, GROUND FLOOR PATIOS AND BASEMENTS AND NEAR ANY MOISTURE SOURCE. WHEN MOISTURE ALARMS OCCUR, THE WATER SUPPLY TO THE BUSINESS OR HOME CAN BE IMMEDIATELY TURNED OFF TO PREVENT EXTENSIVE WATER DAMAGE

REFRIGERATION MONITORING AND CONTROL

MOTOR TEMPERATURE AND CURRENT SENSORS

VIBRATION SENSORS TO INDICATE UNEXPECTED SAW

OR HAMMER DRILL OPERATION

**TEMPERATURE AND VAPOR SENSORS FOR FURNACE ROOMS, WATER HEATER ROOMS,
GAS AND OIL FIRED STEAM PLANT ROOMS. THESE SENSORS MAY AUTOMATICALLY
TURN OFF ENERGY SUPPLIES WHEN AN ALARM INDICATES A NEED TO DO SO.**

WATER QUALITY AND PH SENSORS

HOME SECURITY SENSORS FOR

RADIATION AND NOXIOUS GASSES

ANY OTHER APPLIANCE OR SYSTEM NEEDING 24/7 MONITORING/CONTROL.

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SECURITY SCENARIOS

Scenario #1 - It is dusk and a father is driving home from work and calls his wife to ask her to have supper ready. There is no answer and he supposes that she has stepped into the bathroom or something. He opens his garage door as he approaches his home and, as he drives into his garage, he notices something out of the corner of his eye. He quickly closes the garage door and as he gets out of his car, he suddenly realizes that someone is standing behind him. He feels a hard object against his back and a voice says: "Don't make any sudden moves. Take me into your home. I have cut your telephone line and your security system is no good to you."

Case 1. The homeowner has a conventional security system and hasn't got a chance of it doing him any good because the intruder has already cut the telephone line. The intruder will be in his home and the family will be subject to his desires and no one will know the results until after the deeds are done, sometimes days after.

Case 2. The homeowner has NABORLINK. As the homeowner is escorted to the alarm keypad, he is instructed by the intruder to turn it off so there will be no loud alarms ringing. The homeowner obeys and puts in the modified alarm code.

Suddenly, there is a knock at the front door. The intruder orders the homeowner to answer it and get rid of whoever it is. The door is answered and it is two next door neighbors asking for help with a plumbing problem. (The neighborhood watch training program has already instructed the neighborhood homeowner families what to do in a case like this.) The intruder prods the homeowner with the hard object and the homeowner angrily refuses to help the neighbors and slams the front door. The intruder becomes increasingly agitated. Then, several headlights from cars are suddenly shining on the house, floodlights comes on from the neighbors in the rear and sides and shines on the back and side yards, and a bull horn announces that the home is surrounded and that the intruder should come out with his hands up which he does. His neighbors were already outside taking pictures of the intruder's car. Happy ending.

Case 3. Same as case 3 except that the intruder does not surrender and a hostage condition is generated. Far better than the scenario of case 1.

Scenario #2. It is winter and the family of seven is sleeping soundly. The father is out of town. One of the teenagers has an aging heater plugged into an outlet in his bedroom to help him be a little warmer. Corrosion on the heater plug contacts has caused excessive heat in the plug itself. A sheet from the bed is hanging over the plug and begins to smolder.

Case 1. The smoke from the smoldering sheet begins to fill the room and rise to the top of the room where a smoke detector begins to respond which it does but not before the teenager has been overcome with smoke. The smoke detector finally responds with a shrill tone and a telephone call to the conventional monitoring service is placed notifying the operator that there is a smoke alarm. The operator tries to contact someone at the home through the phone to verify the emergency but all that is heard is people yelling and trying to wake family members and to get them out of the house. No one realizes that the teenager by the heater is unconscious. The operator wisely realizes there is an emergency and notifies the local fire department. By this time, the teenager's room is an inferno. Within ten minutes, the fire trucks are pulling up to the house and assisting in getting people out of the house and bringing fire hoses to put out the fire that has spread to other rooms of the house. Smoke and heat is intense. The teenager has succumbed before the fire is put out. Unhappy ending.

Case 2. When the smoldering sheet first produces smoke, the NABORLINK smoke detector signals the electronic controller and all other detectors in the home that there is smoke in the teenager's bedroom. The homeowner is immediately notified over speakers at the controller and in all bedrooms in the house of the smoke and the location of the bedroom and to leave the home immediately. Within seconds, the following occurs:

1. Authorities are notified.

2. Four neighbors are notified verbally from speakers in their own NABORLINK controllers and in their master bedrooms that the home has a smoke alarm.

3. The neighbors are told where the room is in the home and to get a fire extinguisher (the CERT Training Program has already instructed the neighbors for this situation) and to go to the home to help if they can.

4. Four neighbors converge on the home and go right to the teenager's bedroom and put out the smoldering sheet before it erupts into flame.

5. The firemen were backups in this case.

Happy ending.

Question: How did the neighbors get into the home? Each home can be equipped with a key lock box which contains keys to the associated door. This box is unlocked when an applicable alarm has occurred allowing entry into the home.

Scenario #3. A young mother is working in her front yard garden and wisely leaves the NABORLINK system in the ARM mode. A stranger approaches and begins a conversation of a type that upsets the mother. She runs quickly into her home and barricades herself in a safe room. When she opened the door, the NABORLINK system repeats the voice: "Please enter one, then your code, to cancel the impending alarm" for 60 seconds and then sends the alarm to neighbors and authorities. The stranger also enters the home. With the NABORLINK system, no keyboard operations were necessary and within seconds, four neighbors converge on the home to assist and protect the mother. Without the NABORLINK system, one can only imagine the outcome of this scenario.

Scenario #4. An airline pilot who flies near our nation's capitol is under surveillance by a Caucasian cell of an international terrorist group. They have found ways of knowing the pilot's schedule. On a critical day, they observe his departure from the home to make his flight. After he leaves, they invade his home and he receives a cell phone call with the message that "We are in your home with your family. Here is what we want you to do." At this point the pilot must make a personal decision: perform their requested deed or sacrifice his family.

With NABORLINK, when the pilot's family is invaded, since his critical occupation is in the internet packet, notification is sent to the authorities. They notify the airline to not let the pilot fly thereby taking the responsibility away from him and placing the hostage situation in the hands of authorities. Better ending.

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Scenario #5.

Case 1. True story. On Sunday, November 6, 2005 at around 1:50 am CST, a tornado touched down 2 miles north-northwest of Smith Mills in Henderson County, Kentucky, near the Indiana/Kentucky border, and then crossed the Ohio River into Vanderburgh County, Indiana. Staying just south of I-164, the tornado traveled to the northeast causing extensive damage to parts of Evansville, Newburgh, and Boonville. The tornado lifted in Spencer County, 1.5 miles south-southwest of Gentryville. According to a damage survey done by the National Weather Service office in Paducah, Kentucky the damage path was at least 400 yards wide and 41 miles long. The tornado's maximum wind speed was estimated to be 200 mph, making it a high-end F3 on the Fujita scale.

Tornado warnings were in effect at the time and issued on average about 30 minutes before the tornado hit, but few people were alerted as many were asleep as the tornado hit in the overnight hours. The local NOAA Weather Radio transmitter was experiencing technical difficulties at the time, causing some weather radios to not sound an alarm. The tornado killed 25 people; two of the victims died from injuries more than a month after the storm. Damages were estimated at around \$85 million.

Ellis Park Racecourse, (a horse racing facility between Henderson and Evansville), was directly hit by the tornado. The track suffered heavy damage; 11 of its 38 barns were destroyed and another 11 were damaged, and several of their racehorses were killed. Extensive tree damage also occurred in the area as the tornado leveled a swath of forests. The worst damage occurred in the southeast side of Evansville, where the Eastbrook Mobile Home Park suffered extreme damage from the tornado. Among the 350 trailers in the park, over 100 were flattened and another 125 were severely damaged. Twenty people were killed in the park and another 230 were injured. Electricity service was cut for over 25,000 customers in the area after the tornado hit. (From Wikipedia)

Case 2. All of the residents of these towns had the NABORLINK systems in their homes. The National Weather Service had been tracking these tornadoes for hours and began predicting their paths. They determined that several zip codes were in immediate danger. By previous arrangement, the NWS sent these warnings to the local NABORLINK Central that included these zip codes. Within seconds, the loud verbal message: "TORNADO WARNING, EVACUATE TO THE EAST" was repeatedly sounded in each home in these communities allowing ample time for them to leave the area and at least be in their automobiles during the expected onslaught. Very possible, good ending.

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Testimonials



RS INFORMATION SYSTEMS, INC.

DLS0805.001
August 25, 2005

Mr. Ruel Clark
Provider Services, Inc.
13846 South, 1950 West
Bluffdale, UT 84065

Dear Ruel:

When the National Weather Service Radar Operations Center needed a unique controller for a radar shelter HVAC system, you and Provider Services, Inc. responded with a customized industrial controller based on a proven design. This microcomputer device provides control for 16 different HVAC subsystems to provide up to 30 tons of air conditioning, plus ventilation, heating, dehumidification, and optional humidification, in an experimental radar shelter with widely-varying heat load. One of the key requirements of our HVAC system is reliability, and the PSI controller has delivered 100% reliability, with zero incidences of HVAC controller reliability causing test delays.

As the project engineer for the HVAC system, I want to thank you for your extraordinary efforts to help make the HVAC project a success. You personally traveled to Norman, Oklahoma, to install and program the HVAC controller. You spent most of a week on-site customizing the software to meet the Weather Service's unique requirements and adding new capabilities. You collaborated closely with me, and made many changes to the software as directed. It was a pleasure to work with you.

Provider Services, Inc. has provided excellent support for the controller, providing software and hardware updates at no additional charge. You are always available via cell phone to help with any questions or problems. Thank you for loaning test fixtures, and providing cables and software for editing and uploading the software.

I can heartily recommend Provider Services, Inc. for any similar project. Your technical skill and dedication to customer satisfaction have resulted in a very capable and reliable HVAC system, and a highly-successful development and implementation process. Thank you.

Sincerely,
RS Information Systems, Inc.

A handwritten signature in dark ink, appearing to read "Donald L. Sander". The signature is written in a cursive, flowing style.

Donald L. Sander
Facilities Engineer

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Marketing Plan

This system will never be sold door-to-door. With the internet and social networks, marketing will be done exclusively by advertising and referral. These referrals will be solicited through social contacts. NABORLINK will be responsible for verifying the accuracy of subscriber applications that are filled out online by the subscribers themselves. Subscribers will contact interested parties and through these social contacts begin inviting them to neighborhood group meetings. Sales of this product will be by neighborhoods and communities which will encourage the rapid growth in ever expanding neighborhoods.

The above plans will be modified as legal documents are finalized to meet unexpected challenges in the initial testing and marketing periods.

The monthly subscriber costs are targeted at \$10.00. This monthly income will be used for customer service, litigation reserves, replacement reserves for batteries and smoke type detectors which are the only devices that have a finite life and return on investment. All profits above that needed for a reasonable ROI will be returned to the communities that use these systems and other worthwhile philanthropic purposes.

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Installation Instructions

Installation of this system should be very simple for most people. It requires a “do-it-yourself” attitude and familiarity with hand tools and electric drills. So the solution for those who are not gifted with “hands-on” activities, neighborhoods can pool their skills to make sure that all subscribers in the neighborhood receive a solid, well arranged and perfected installation.

After receiving your equipment, verify that all of your order is complete by matching your individual ordered part descriptions with the descriptions on the receive packages. Full installation instructions accompany the device packages.

General instructions: Each NaborLink System consists of one Controller, up to five Consoles and up to 32 of each of 26 unique stations, not to exceed a total of 400 stations. Consoles are connected in parallel to the Controller to one of two connectors marked “CONSOLE”. Similarly, the stations connect in parallel to to the Controller to one of two connectors marked “STATIONS”. The dual connectors allow connecting from two directions reducing the need for long cable runs.

Mount the controller in a secluded location, with access to a grounded, 120 volt, AC power socket and an outside wall. Cable runs to all Consoles and stations originate at this point.

The connection between the Controller, Console and stations consists of two networks: one for all Consoles and one for all stations. Each of these networks consists of a four conductor, 22 gauge, solid copper cable. Each cable has four colors: Black for the power source, green for the plus and red for the minus RS485 Transceiver connection and white for power ground return.

Each Controller, Console and station has two four pin IDC (Insulation Displacement connector)

connectors for input and output connections. Connections are made by stripping the outer jacket for four inches using the 1/8" slot of a wire stripper (the only stripping required) and then placing each colored wire, one at a time, all of the way into its designated connector position indicated on the circuit board and then pressing each IDC pin down to the first stop. This holds the wire temporarily in the connector. Then, after all four wires are in the first stop, pressing each IDC pin to the second stop which securely clamps on the individual wires. At this point, all four IDC pins should be even with the top of the IDC. The four wires are then wrapped around its connector to allow the IDC to rest on the inside surface of its case and not on wires when the cover is in place.

ALL TECHNICAL AND LITERARY RIGHTS TO THIS SYSTEM ARE RESERVED!

RUEL ROSS CLARK

BLUFFDALE, UTAH

January-2018

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