

on·Q



inQUIRE™ 1000

Installation Guide

1307881 Rev. O

Federal Communications Commission Statement

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

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

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

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

Reprinted from the Code of Federal Regulations #47, part 15.193, 1993. Washington DC: Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. THE UNIT MUST NOT BE EXPOSED TO DRIPPING OR SPLASHING WATER.

CAUTION: DO NOT OPEN THE UNIT. DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE INSTALLATION AND TROUBLESHOOTING INSTRUCTIONS. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: THIS DEVICE MUST BE INSTALLED AND USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AS DESCRIBED IN THE USER DOCUMENTATION THAT COMES WITH THE PRODUCT.

WARNING: POSTPONE INSTALLATION UNTIL THERE IS NO RISK OF THUNDERSTORM OR LIGHTNING ACTIVITY IN THE AREA.

When using this device, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Read all of the instructions (listed here and/or in the user manual) before you operate this equipment.
- Give particular attention to all safety precautions.
- Retain the instructions for future reference.
- Comply with all warning and caution statements in the instructions.
- Observe all warning and caution symbols that are affixed to this equipment.
- Comply with all instructions that accompany this equipment.
- Avoid using this product during an electrical storm. There may be a risk of electric shock from lightning. It is recommended that the customer install an AC surge protector in the AC outlet to which this device is connected. This is to avoid damaging the equipment by local lightning strikes and other electrical surges.
- Operate this product only from the type of power source indicated on the product's marking label.
- If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in safe operating condition.

Installation of this product must be in accordance with national wiring codes and conform to local regulations.

Wipe the unit with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.

Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.

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C. Warranty Information

LIMITED ONE YEAR PRODUCT WARRANTY

On-Q/Legrand ("On-Q") warrants to the original end user ("Customer") that those products manufactured by or for On-Q ("Warranted Products"), as conclusively evidenced by the name or logo of On-Q appearing on the product, will be free from defects in workmanship and materials, under normal use, for (1) one year from the date of original purchase from On-Q or its authorized dealer or installer. The sole obligation of On-Q under this express warranty shall be, at the option and expense of On-Q, to replace the product with a comparable product, or repair the product. In no event shall On-Q be liable for incidental, consequential, or punitive damages, or for labor or other costs in connection with diagnosing, repairing, removing, installing, shipping, servicing, or handling the defective product. Replacement products may be new, rebuilt, remanufactured or reconditioned. On-Q warrants any replaced or repaired product for a period of ninety (90) days from shipment, or through the end of the original warranty period, whichever is longer. On-Q makes no warranty with respect to products it sells that do not contain the authorized On-Q name or logo, and Customer, by acceptance of the product, agrees that its sole and exclusive remedy shall be against the manufacturer of such product.

The foregoing warranty for Warranted Products does not extend to (i) damage or repairs required as a result of improper wiring, misuse, misapplication, abuse, improper servicing, unauthorized alteration, improper operation, or handling, storage, installation, or operation that is not in accord with instructions that may be furnished with the product; (ii) failures due to abnormalities in or interruption of electrical service; or (iii) damage caused by lightning, floods, winds, fires, accidents, corrosive atmosphere, temperature extremes, or other conditions that are beyond the control of On-Q. Original purchases or replacement products may be new, rebuilt, remanufactured or reconditioned. This warranty gives the Purchaser specific legal rights, and the Purchaser may also have other rights which vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to the Purchaser. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to the Purchaser.

Obtaining Warranty Service

Customer must contact an On-Q authorized Dealer or Installer within the applicable warranty period to obtain warranty service. Dated proof of original purchase from On-Q or its authorized Reseller or Dealer will be required.

VI. Troubleshooting

This section will detail possible solutions to common problems that might occur during installation of or in using the On-Q/Legrand inQUIRE™ 1000 Intercom System.

A. Contact Information

If you are unable to locate a solution here, please access our website at www.onqlegrand.com for the latest information. You can also reach us at 1-800-321-2343.

B. Troubleshooting Guide

Problem	Solution
No power to any intercom unit	<ul style="list-style-type: none"> Check Intercom Module power LED to verify that it is lit. If not, make sure power supply is plugged in. Verify that you are using the correct 12V power supply for your system by obtaining the model number and calling your On-Q installer or On-Q Technical Support. If you are not using a 12V power supply that supplies enough current to the system, then the Units may not power on.
No power to a specific Room Unit, Desktop Unit, Patio Unit, Door Unit, or Main Console Unit	<ul style="list-style-type: none"> Check the Cat 5e cable terminations at both the rear of the Unit (or at the outlet for Desktop Units) and at the Intercom Module. Verify that your terminations follow the T568A wiring standard. If your wiring terminations are visibly correct according to the T568A standard, test the conductivity of the connections, and re-terminate if a problem is found. Check to see if a Unit will power on by plugging it into a different port on the Intercom Module.
Feedback or squeal noise from Main Console Unit, Room Unit, Desktop Unit, Patio Unit, or Door Unit speaker	<ul style="list-style-type: none"> Verify Unit placement. Avoid placing Units back to back on a common wall. If Units must be placed on both sides of a common wall, do so in a manner which avoids feedback problems, ensuring that the audio from a Unit's speaker will not be audible to a nearby Unit's microphone. Feedback issues can normally be eliminated by adjusting the volume of a Unit from a high level to a medium level.
Hum or buzzing noise that can be heard in some or all units of the inQUIRE™ 1000 Intercom System	<ul style="list-style-type: none"> Verify that the proper wiring guidelines, found in this manual, have been followed. Verify that Cat 5e cabling does not run parallel to and within 12 inches of AC power cabling. Also avoid running Cat 5e cabling near florescent lighting fixtures, dimmer switches, or fan controls.
A Room Unit that is plugged into the port labeled "12/DOOR 3" on the Intercom Module is not functioning correctly	<ul style="list-style-type: none"> Look at the rear circuit board of the Intercom Module. Locate the pin array labeled JP100. The Unit is shipped with a shorting block installed on two of the pins. These pins are the topmost pins and are located directly underneath the label "JP100". Make sure this shorting block is installed.
A third Door Unit is not functioning properly	<ul style="list-style-type: none"> Verify that the third Door Unit is plugged into the port on the front of the Intercom Module labeled "12/DOOR 3". By default, the "12/DOOR 3" port on the Intercom Module is configured to operate a Room Unit. To use this port for a third Door Unit, you must first remove the shorting block which is installed on the top two pins of the pin array labeled "JP100" on the rear circuit board of the Intercom Module.

I. Installation Safety Precautions

NOTE: Read all instructions carefully and completely before installing the On-Q/Legrand inQUIRE™ 1000 Intercom System.

Throughout the following safety precautions and instructions the term "component" will be used to indicate one or all of the following: Intercom Module, Main Console Unit, Room Unit, Desktop Unit, Patio Unit, or Door Unit.

- These installation instructions were designed for use by an authorized On-Q installer only. Do not attempt to service, move, or change any component of this system unless you are qualified to do so.
- This system must be installed by an authorized On-Q/Legrand Installer and must conform to all local building and electrical codes.
- Do not** apply power to the Intercom Module until all inQUIRE™ 1000 Intercom System components have been installed and all wiring has been properly terminated.
- Do not** attempt to terminate, change, or un-install any wiring without first turning off power at the Intercom Module which is located in the On-Q enclosure. Unplug the power transformer that is powering the Intercom Module from the power outlet before proceeding with wiring terminations or changes.
- Install each component of this system **away** from heat sources such as heating ducts/registers, stoves, or any other heat source.
- Do not** install any component in a return air duct.
- The inQUIRE™ 1000 Intercom Module and any other component module were designed to be installed into an On-Q/Legrand enclosure. This enclosure must be installed in a cool dry area and must be installed according to its installation instructions. Do not install an On-Q enclosure or any On-Q module or device in an unheated garage, attic, or outside wall.
- Do not** expose any inQUIRE™ 1000 Intercom System component that was designed for indoor use to moisture. Doing so can create electrical hazards or render the component unusable. Exposure to moisture will also void the warranty on the system.
- Only use** On-Q/Legrand authorized components, modules, and devices with the inQUIRE™ 1000 Intercom System. Not doing so will void the warranty of the system.
- Only use** a damp cloth to clean the cover plates of the system components.
- Do not** use vacuum cleaners, liquid or aerosol cleaners to clean any of the system components.

II. System Components Overview

A. System Components

The following components (in addition to a suitable power supply) are typically utilized to make up the inQUIRE™ 1000 Intercom System (see **Figure 1**).



Figure 1 - inQUIRE™ 1000 Intercom System Components

- **Intercom Module:** This module is typically installed in the On-Q enclosure and is considered the "brains" of the system. All Room Units, Door Units, Patio Units and the Main Console Unit are connected directly to the Intercom Module via "home run" style Cat 5e cabling. The Intercom Module also supplies power to the entire inQUIRE™ 1000 Intercom System.
- **Main Console Unit:** In addition to providing the same basic intercom features found with Room Units, the Main Console Unit also includes a bank of status LEDs which show, at a glance, Room Units that are talking, muted, or in monitor mode. It also includes a dedicated door release button (functional when an electronic door release device is installed), and a talk hands free button, which allows users of Room Units to talk without having to push their "talk" buttons.
- **Room Unit:** This unit provides basic intercom communication functions such as talk, talk to door (if Door Unit is installed), monitor and mute. Up to 12 Room Units can be installed per system.
- **Desktop Unit:** This unit provides the same functionality as a Room Unit, but can be placed on a desktop or nightstand instead of being installed in the wall. It is connected to any Cat 5e outlet with its supplied cable.

E. Door Unit

Please refer to **Figure 16** to familiarize yourself with the operation of the inQUIRE™ 1000 Door Unit.

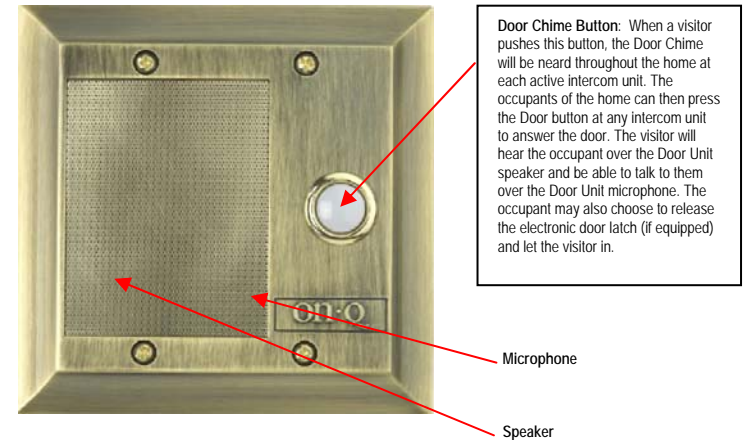


Figure 16 - inQUIRE™ 1000 Door Unit Operation

D. Patio Unit

Please refer to **Figure 15** to familiarize yourself with the operation of the inQuire™ 1000 Patio Unit.

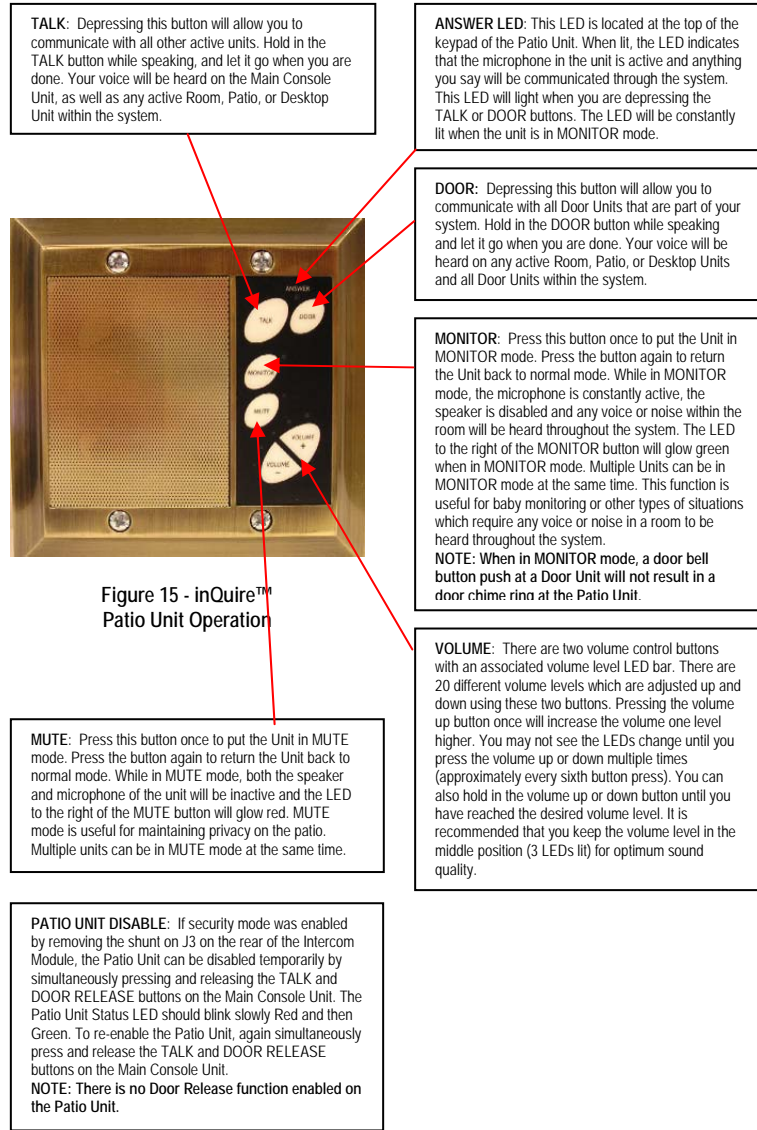


Figure 15 - inQuire™
Patio Unit Operation

- **Patio Unit:** This unit also provides typical Room Unit functionality in a weather resistant wall mounted package for your patio. For security reasons, its door release functionality may be disabled.
- **Door Unit:** This unit allows a visitor to the home to press the door chime button on the unit to notify the occupants of their presence (requires Door Chime to be installed). The occupants can then initiate a two-way communication with the visitor and even open the door (requires electronic door release device, not included).
- **Door Chime:** This component installs as an add-on to the Intercom Module. It enables a chime to be heard on all the units that are not in MUTE or MONITOR mode throughout the inQuire™ 1000 Intercom System.

III. Wiring Specifications

A. Specifications

- Minimum cable rating: Category 5 UTP, 4 pair solid conductors (24 AWG),
- 100 ohm, 100 Mhz, General Purpose (CM), UL listed Maximum length per run: 325 feet
- Termination standard: T568A
- Terminating plug type (where necessary): Solid Conductor RJ45
- Terminating block type (where available): 110-style IDC

B. Guidelines

- Do not exceed 25 lbs. of force when pulling cable.
- Do not splice cables.
- Do not staple cables. Use wire ties with screw mounts to loosely secure cabling.
- Avoid running Cat 5 cable parallel to 120V/240V AC wiring or fixtures within 12 inches.
- Avoid "ganging" any intercom unit with a lighting dimmer switch. Maintain at least 12 inches of separation from dimmer switches.
- If you must cross AC wiring, do so at a 90 degree angle with at least 2 inches of separation.
- Maintain a minimum 1" bend radius.
- Do not untwist Cat 5 conductors more than 1/2" at any termination point.
- Keep cables away from HVAC ducts, or anything with sharp edges that could cause damage.
- Clearly label all cabling runs at both ends. Use the distance between your hand and your elbow as a guide to determine how far from the end of the cable to place the label.

C. Unit Placement Tips

Carefully plan the placement of Room Units and the Main Console Unit before rough-in to avoid any feedback issues that are associated with audio devices.

- To minimize the likelihood of any feedback issues avoid placing units back to back on a common wall. If units must be placed on both sides of a common wall, then do so in a manner which avoids feedback problems.
- Do not place intercom units within the same room in the home.
- Avoid any situations where the speaker of a unit points to and has a clear line of sight to another unit's microphone.

D. Termination Instructions

All termination can be correctly completed by following the T568A pin assignments. It is important that you accurately terminate using T568A at all

C. Desktop Unit

Please refer to **Figure 14** to familiarize yourself with the operation of the inQuire™ 1000 Desktop Unit.

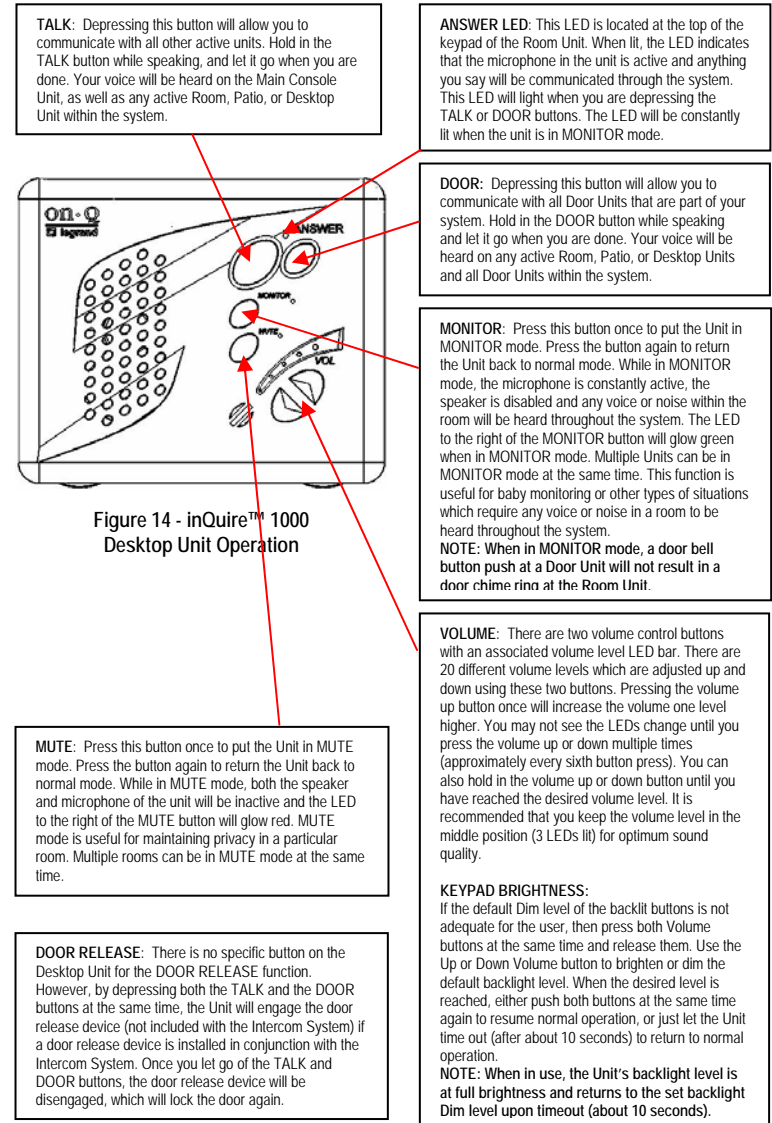


Figure 14 - inQuire™ 1000 Desktop Unit Operation

B. Room Unit

Please refer to **Figure 13** to familiarize yourself with the operation of the inQuire™ 1000 Room Unit.

TALK: Depressing this button will allow you to communicate with all other active units. Hold in the TALK button while speaking, and let it go when you are done. Your voice will be heard on the Main Console Unit, as well as any active Room, Patio, or Desktop Unit within the system.

ANSWER LED: This LED is located at the top of the keypad of the Room Unit. When lit, the LED indicates that the microphone in the unit is active and anything you say will be communicated through the system. This LED will light when you are depressing the TALK or DOOR buttons. The LED will be constantly lit when the unit is in MONITOR mode.

DOOR: Depressing this button will allow you to communicate with all Door Units that are part of your system. Hold in the DOOR button while speaking and let it go when you are done. Your voice will be heard on any active Room, Patio, or Desktop Units and all Door Units within the system.

MONITOR: Press this button once to put the Unit in MONITOR mode. Press the button again to return the Unit back to normal mode. While in MONITOR mode, the microphone is constantly active, the speaker is disabled and any voice or noise within the room will be heard throughout the system. The LED to the right of the MONITOR button will glow green when in MONITOR mode. Multiple Units can be in MONITOR mode at the same time. This function is useful for baby monitoring or other types of situations which require any voice or noise in a room to be heard throughout the system.
NOTE: When in MONITOR mode, a door bell button push at a Door Unit will not result in a door chime ring at the Room Unit.

VOLUME: There are two volume control buttons with an associated volume level LED bar. There are 20 different volume levels which are adjusted up and down using these two buttons. Pressing the volume up button once will increase the volume one level higher. You may not see the LEDs change until you press the volume up or down multiple times (approximately every sixth button press). You can also hold in the volume up or down button until you have reached the desired volume level. It is recommended that you keep the volume level in the middle position (3 LEDs lit) for optimum sound quality.

KEYPAD BRIGHTNESS:
If the default Dim level of the backlight buttons is not adequate for the user, then press both Volume buttons at the same time and release them. Use the Up or Down Volume button to brighten or dim the default backlight level. When the desired level is reached, either push both buttons at the same time again to resume normal operation, or just let the Unit time out (after about 10 seconds) to return to normal operation.
NOTE: When in use, the Unit's backlight level is at full brightness and returns to the set backlight Dim level upon timeout (about 10 seconds).

MUTE: Press this button once to put the Unit in MUTE mode. Press the button again to return the Unit back to normal mode. While in MUTE mode, both the speaker and microphone of the unit will be inactive and the LED to the right of the MUTE button will glow red. MUTE mode is useful for maintaining privacy in a particular room. Multiple rooms can be in MUTE mode at the same time.

DOOR RELEASE: There is no specific button on the Room Unit for the DOOR RELEASE function. However, by depressing both the TALK and the DOOR buttons at the same time, the Unit will engage the door release device (not included with the Intercom System) if a door release device is installed in conjunction with the Intercom System. Once you let go of the TALK and DOOR buttons, the door release device will be disengaged, which will lock the door again.

Figure 13 - inQuire™ 1000 Room Unit Operation

locations. There are two different types of terminations you will encounter when installing the inQuire™ 1000 Intercom System: RJ45 plugs and 110 punchdown blocks.

Refer to the diagrams below (see **Figure 2**) which show the correct T568A termination for both RJ45 plugs and 110 punchdown blocks.

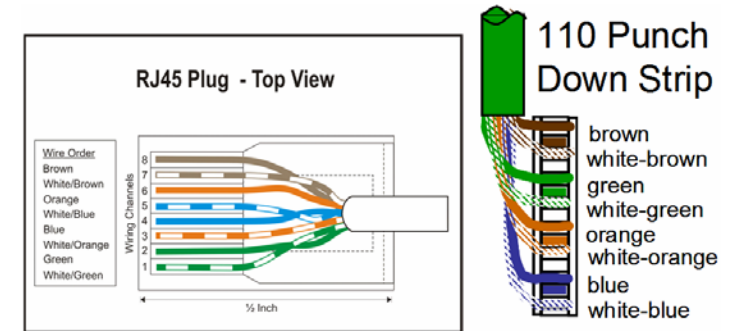


Figure 2 - T568A Termination Color Code Reference

IV. System Wiring Overview

A. Pre-Wiring (Rough-In)

The rough-in of the inQUIRE™ 1000 Intercom System should be completed during the construction phase of the home and prior to the installation by the home builder of any wall covering such as drywall. The following section will instruct you on the proper methods to pre-wire your cable and rough-in the opening for the various inQUIRE™ 1000 Intercom System components (see **Figure 3**).

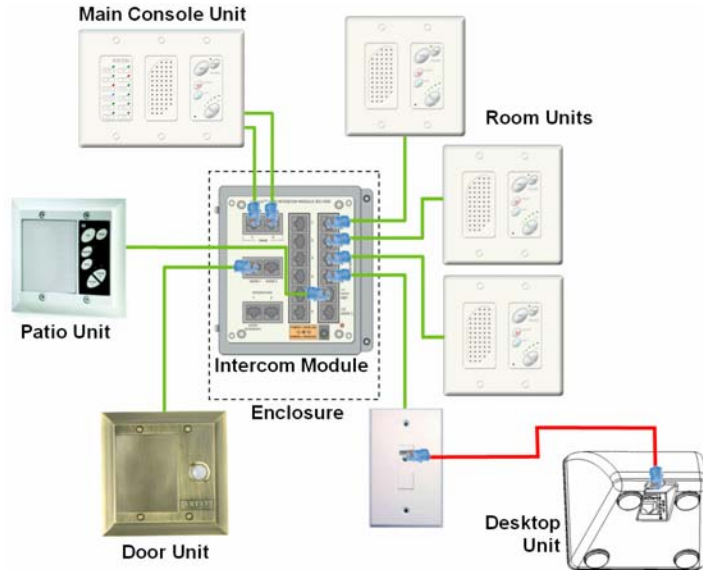


Figure 3 - inQUIRE™ 1000 Intercom System Rough-In Phase

1. Main Console Unit

The procedure to rough-in the Main Console Unit is as follows:

- Since the Main Console Unit provides status LEDs for monitoring of the entire intercom system, it is recommended that this unit is installed in a central location. Traditionally, this unit is installed in the kitchen area. Verify the location with the homeowner before proceeding.
- The Main Console Unit mounts in a standard 3 gang electrical box. The use of an enclosed box rather than an open mud ring will help minimize the potential for feedback between units.
- Any UL approved metal or plastic gang box can be used.

V. System Operational Overview

The following section explains the various functions and operational features of the components of the inQUIRE™ 1000™.

A. Main Console Unit

Please refer to **Figure 12** to familiarize yourself with the operation of the inQUIRE™ 1000 Main Console Unit.

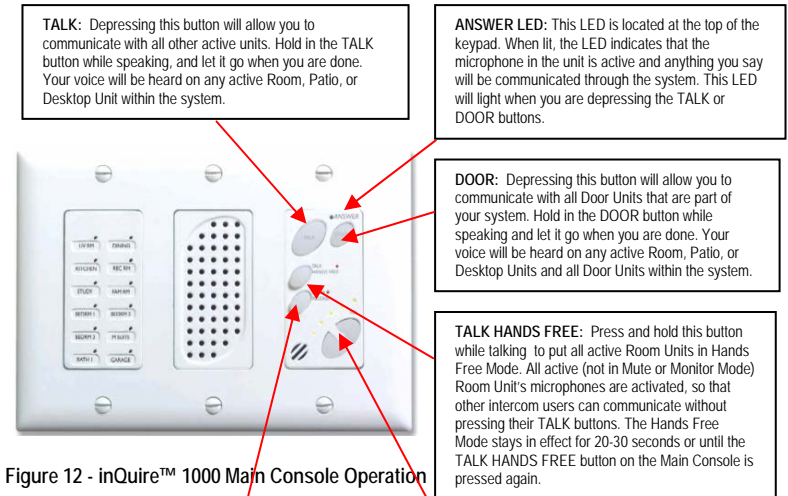


Figure 12 - inQUIRE™ 1000 Main Console Operation

DOOR RELEASE: Pressing the DOOR RELEASE button will engage the door release device (not included with the Intercom System) if a door release device is installed. Once you let go of the button, the door release device will be disengaged, which will lock the door again.

PATIO UNIT DISABLE: If a Patio Unit is installed in Port #11 and security mode was enabled by removing the shunt on J3 on the rear of the Intercom Module, the Patio Unit can be disabled temporarily by simultaneously pressing and releasing the TALK and DOOR RELEASE buttons on the Main Console Unit. The Patio Unit Status LED should blink slowly Red and then Green. To re-enable the Patio Unit, again simultaneously press and release the TALK and DOOR RELEASE buttons on the Main Console Unit.

STATUS LEDs: Each LED indicates the status of each Room Unit in the system. A GREEN light indicates that the Room Unit's Talk or Door button is depressed and someone is talking with the unit. A RED light indicates that the Room Unit is in MUTE mode and that all speaker and microphone functions of the unit are disabled. An ORANGE light indicates that the unit is in Monitor mode and its microphone is currently active. Pre-printed and blank labels are included in the package to identify LEDs.

ANSWER LED: This LED is located at the top of the keypad. When lit, the LED indicates that the microphone in the unit is active and anything you say will be communicated through the system. This LED will light when you are depressing the TALK or DOOR buttons.

DOOR: Depressing this button will allow you to communicate with all Door Units that are part of your system. Hold in the DOOR button while speaking and let it go when you are done. Your voice will be heard on any active Room, Patio, or Desktop Units and all Door Units within the system.

TALK HANDS FREE: Press and hold this button while talking to put all active Room Units in Hands Free Mode. All active (not in Mute or Monitor Mode) Room Unit's microphones are activated, so that other intercom users can communicate without pressing their TALK buttons. The Hands Free Mode stays in effect for 20-30 seconds or until the TALK HANDS FREE button on the Main Console is pressed again.

VOLUME: There are two volume control buttons with an associated volume level LED bar. There are 20 different volume levels which are adjusted up and down using these two buttons. Pressing the volume up button once will increase the volume one level higher. You may not see the LEDs change until you press the volume up or down multiple times (approximately every sixth button press). You can also hold in the volume up or down button until you have reached the desired volume level. It is recommended that you keep the volume level in the middle position (3 LEDs lit) for optimum sound quality.

KEYPAD BRIGHTNESS: If the default Dim level of the backlit buttons is not adequate for the user, then press both Volume buttons at the same time and release them. Use the Up or Down Volume button to brighten or dim the default backlight level. When the desired level is reached, either push both buttons at the same time again to resume normal operation, or just let the Unit time out (after about 10 seconds) to return to normal operation.
NOTE: When in use, the Unit's backlight level is at full brightness and returns to the set backlight Dim level upon timeout (about 10 seconds).

NOTE: Only door release devices that operate using 12V DC and have a maximum current draw of 500mA are to be used with the inQUIRE™ 1000 Intercom System.



Figure 11 - Install Intercom Module into Enclosure

- Insert the Intercom Module into the mounting bracket and insert the bracket into the On-Q enclosure. Secure the Intercom Module to the bracket by depressing each plunger at each corner of the Intercom Module.
- DO NOT apply power to the Intercom Module until all RJ45 plugs are seated in the correct jacks on the Intercom Module.
- Plug in all RJ45 connectors for Room and Desktop Units into the appropriate jacks on the Intercom Module according to your cable labeling.
- If utilized, plug the RJ45 connector for the Patio Unit into the jack labeled "11/PATIO UNIT" on the Intercom Module.
- The Main Console Unit cables should plug into the correct MAIN jacks according to the cable labeling.
- If 3 total Door Units will be used then the third Door Unit cable must plug into the jack labeled 12/DOOR 3 on the Intercom Module and you must remove a shorting block from pin #1 of JP100 on the rear of the Intercom Module (see **Figure 11**).
- Pin #2 of JP100 controls whether you want to hear the chime sound associated with the optional Door Chime at the Door Unit or not. If you do want to hear the Door Chime at the Door Unit when the doorbell button is pressed, remove the jumper from pin #2 (see **Figure 11**).
- Pin #3 of JP100 is associated with Patio Unit functionality. If you are using a Patio Unit, plug it into port #11/PATIO UNIT and remove the jumper from pin #3 of JP100. This is also called "Security Mode", and allows the Patio Unit to be temporarily disabled from the Main Console by simultaneously pressing the TALK and DOOR RELEASE buttons. If the jumper on pin #3 is left on, port #11 is configured to support a standard Room Unit.

NOTE: For obvious security reasons, there is no door release function enabled on a Patio Unit.

- Apply power to the Intercom Module and verify system functionality.

- To avoid damage from debris during or after construction, use an enclosed gang box.
- The 3 gang box should be installed at the same height as electrical switch boxes in the home.
- A total of **TWO** Cat 5e runs are required to operate the Main Console Unit.
- Run **TWO** Cat 5e cable runs from the 3 gang box directly to the enclosure where the Intercom Module will be installed. You must label both ends of the cable runs for the Main Console Unit to ensure proper termination during the trim-out. Label one cable "Main 1" and the other cable "Main 2". Follow the wiring guidelines listed in this manual to ensure a quality cable installation.

2. Room Unit(s)

The procedure to rough-in the Room Unit(s) is as follows:

- Typically the Room Unit(s) will be installed on the same wall as the door to the room. Verify each Room Unit location with the homeowner before proceeding. Avoid installing Room Units in the same stud cavity on opposite sides of the wall to prevent feedback problems.
- The Room Unit mounts in a standard 2 gang electrical box. The use of an enclosed box rather than an open mud ring will help minimize the potential for feedback between units.
- Any UL approved metal or plastic gang box can be used.
- To avoid damage from debris during construction or after construction, use a gang box that will completely enclose the unit.
- The 2 gang box should be installed at the same height as the electrical switch boxes in the home.
- **ONE** Cat 5e run is required to operate the Room Unit.
- Run **ONE** Cat 5e cable from the 2 gang box directly to the enclosure where the Intercom Module will be installed. Label both ends of your cable run to indicate Room Unit number (ex: "Room Unit 5). Follow the wiring guidelines listed in this manual to ensure a quality cable installation.
- Repeat these instructions for each and every Room Unit that will be installed in the system (maximum of 12).

3. Desktop Unit(s)

The procedure to rough-in the Desktop Unit(s) is as follows:

- Typically the Desktop Unit(s) will be connected to a Cat5e outlet on a wall where the desk or nightstand will be placed.. Verify each Desktop Unit location with the homeowner before proceeding
- The Cat 5e outlet for the Desktop Unit typically mounts in a standard 1 gang electrical box or mud ring.
- Any UL approved metal or plastic gang box can be used.
- The 1 gang box should be installed at the same height as the electrical outlet boxes in the home.

- **ONE** Cat 5e run is required to operate the Desktop Unit.
- Run **ONE** Cat 5e cable from the 1 gang box directly to the enclosure where the Intercom Module will be installed. Label both ends of your cable run to indicate Desktop Unit number (ex: "Desktop Unit 5). Follow the wiring guidelines listed in this manual to ensure a quality cable installation.
- Repeat these instructions for each and every Desktop Unit that will be installed in the system (maximum of 12).

4. Patio Unit(s)

The procedure to rough-in the Patio Unit(s) is as follows:

- Typically the Patio Unit(s) will be installed on the exterior of the home next to a patio door. Verify the Patio Unit(s) location(s) with the homeowner before proceeding.
- Since the Patio Unit will most likely be installed on the exterior of the home and will be exposed to weather conditions, these instructions must be followed to ensure a quality installation.

Brick or other cement-based material exteriors:

- The recommended box to use is a 2 gang outdoor weatherproof box. This box should be of the type that is made of heavy die-cast aluminum. Using a heavy die-cast aluminum box will provide adequate strength in a brick or cement-based exterior.

Vinyl or wood based siding material exteriors:

- If possible, use a heavy duty die-cast aluminum 2 gang box if it can be securely mounted to the interior framing. If this is not possible then it is recommended that you use a heavy duty metal 2 gang box that can be securely mounted to the interior framing of the home.
- To ensure the 2 gang box that will be used to house the Patio Unit is roughed in correctly, communication with the building contractor who is responsible for the exterior finish of the home is highly recommended.

Brick or other cement-based material exteriors:

- The masonry contractor must be provided with specific instructions as to how the 2 gang box should be installed including location, correct positioning, and proper depth.
- If possible, clearly mark this information on the home's exterior insulation board or vapor barrier material to serve as a reminder to the mason.
- The correct positioning of the 2 gang box may not be obvious to the masonry contractor. Ensure that the masonry contractor knows which edge of the box is up and which edge is down so that the Patio Unit can be installed in the correct vertical position.

- Place the Door Chime circuit board on the rear of the Intercom Module so that the two mounting holes on the Door Chime circuit board are seated on the Intercom Module threaded mounting studs (see **Figure 10**).

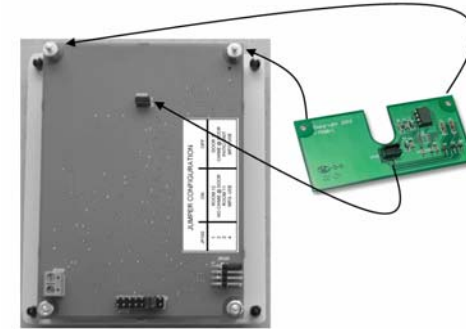


Figure 10 - Install Door Chime

- Ensure that the Door Chime's pin array socket is properly aligned with the pin array (labeled JP203) on the Intercom Module.
- Apply slight downward pressure to the Door Chime circuit board to securely seat the pin array connections together.
- Use the included hex nuts and washers to secure the Door Chime circuit board to the Intercom Module mounting studs.

7. Intercom Module

The procedure to install the Intercom Module is as follows:

- Terminate all cable runs from Room Units, Desktop Units, Patio Units, Door Units, and the Main Console Unit using RJ45 plugs. Follow the T568A wiring standard which can be found in this manual.

NOTE: The proper termination of the RJ45 plugs is critical the correct operation of the inQUIRE™ 1000 Intercom System. Incorrect termination could result in damage or improper operation of the system.

- If you are using a door release device then you must terminate the two conductors from your door release device to the Intercom Module by routing the conductors through the mounting bracket before inserting the Intercom Module into its mounting bracket. The door release device conductors are to be terminated to the blue mounting block (JP202) located on the rear circuit board of the Intercom Module. Maintain correct polarity (see **Figure 11**).

- Untwist cable pairs but be sure to leave 1/2" twist in the pairs between the punchdown block and the start of the cable insulation (see **Figure 9**).

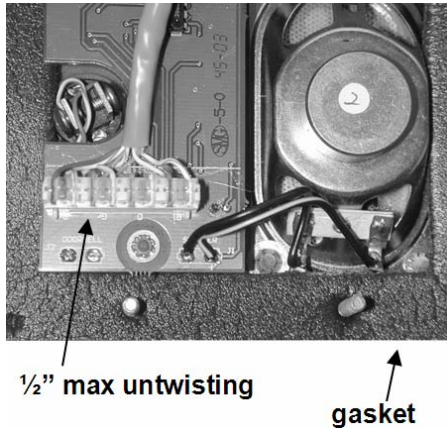


Figure 9 - Trim-Out Door Unit(s)

- As shown in the diagram, the Cat 5e cable must be terminated so that the cable is routed to the punchdown block so that the unit can be installed into a standard gang box while maintaining proper bend radius.
- Following T568A wiring color code, place the pairs firmly into their appropriate positions on the punchdown block. Ensure that the individual conductors are seated tightly enough to allow you to punch them down without having to hold them in place.
- Using a punchdown tool with a 110 style cutting blade, punch down each conductor firmly enough to allow any excess conductor to be cut away by the blade.
- Insert the Door Unit with the gasket in position and the Cat e5 cable into the 2 gang box and secure the unit to the box using the 4 included screws.
- Repeat these instruction for any additional Door Units in your inQUIRE™ 1000 Intercom System.

6. Door Chime

The procedure to install the Door Chime is as follows:

- The Door Chime circuit board installs onto the rear circuit board of the Intercom Module.

NOTE: Remove power from the front of the Module before installing the Door Chime.

- The 2 gang box should be installed by the masonry contractor so that it protrudes slightly from the face of the brick. The box should protrude no less than 1/8" but no more than 1/4" from the face of the brick.

Vinyl or wood based siding material exteriors:

- The 2 gang box can be roughed in to the exterior of the home by first cutting an opening through the exterior base material of the home that is slightly larger than your 2 gang box.
- The 2 gang box should then be securely mounted to the interior framing of the exterior wall and protrudes through the exterior wall at a depth that will need to be determined based on the type of siding that will finish the outside of the wall.
- Ideally, you would want the siding contractor to use flashing and make use of J-channel around the perimeter of the Patio Unit and 2 gang box to provide an attractive and weatherproof siding installation. Siding contractors should use flashing and J-channel around the perimeter of the Patio Unit just as they would with a window.
- Communication with the siding contractor is highly recommended to ensure a smooth installation.

- **ONE** Cat 5e run is required to operate the Patio Unit.
- Run **ONE** Cat 5e cable from the 2 gang box directly to the enclosure where the Intercom Module will be installed. Label both ends of your cable run to indicate "Patio Unit". Follow the wiring guidelines listed in this manual to ensure a quality cable installation.

NOTE: The Patio Unit should be connected to the RJ45 jack that is labeled 11/PATIO UNIT. This will reduce the maximum number of Room Units that can be installed from 12 to 11.

5. Door Unit(s)

The procedure to rough-in the Door Unit(s) is as follows:

- Typically the Door Unit(s) will be installed on the exterior of the home next to an entrance door, where you would normally find a standard doorbell. Verify the Door Unit(s) location(s) with the homeowner before proceeding.
- Since the Door Unit will most likely be installed on the exterior of the home and will be exposed to weather conditions, these instructions must be followed to ensure a quality installation.

Brick or other cement-based material exteriors:

- The recommended box to use is a 2 gang outdoor weatherproof box. This box should be of the type that is made of heavy die-cast aluminum. Using a heavy die-cast aluminum box will provide adequate strength in a brick or cement-based exterior.

Vinyl or wood based siding material exteriors:

- If possible, use a heavy duty die-cast aluminum 2 gang box if it can be securely mounted to the interior framing. If this is not possible then it is recommended that you use a heavy duty metal 2 gang box that can be securely mounted to the interior framing of the home.
- To ensure the 2 gang box that will be used to house the Door Unit is roughed in correctly, communication with the building contractor who is responsible for the exterior finish of the home is highly recommended.

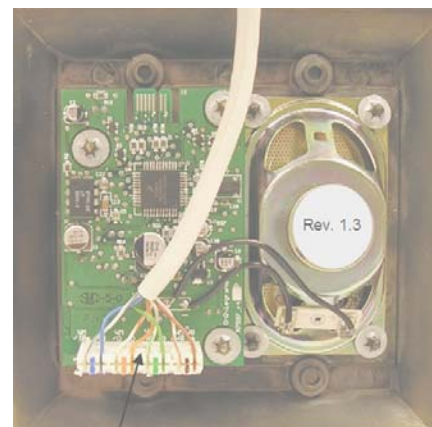
Brick or other cement-based material exteriors:

- The masonry contractor must be provided with specific instructions as to how the 2 gang box should be installed including location, correct positioning, and proper depth.
- If possible, clearly mark this information on the home's exterior insulation board or vapor barrier material to serve as a reminder to the mason.
- The correct positioning of the 2 gang box may not be obvious to the masonry contractor. Ensure that the masonry contractor knows which edge of the box is up and which edge is down so that the Door Unit can be installed in the correct vertical position.
- The 2 gang box should be installed by the masonry contractor so that it protrudes slightly from the face of the brick. The box should protrude no less than 1/8" but no more than 1/4" from the face of the brick.

Vinyl or wood based siding material exteriors:

- The 2 gang box can be roughed in to the exterior of the home by first cutting an opening through the exterior base material of the home that is slightly larger than your 2 gang box.
- The 2 gang box should then be securely mounted to the interior framing of the exterior wall and protrudes through the exterior wall at a depth that will need to be determined based on the type of siding that will finish the outside of the wall.
- Ideally, you would want the siding contractor to use flashing and make use of J-channel around the perimeter of the Door Unit and 2 gang box to provide an attractive and weatherproof siding installation. Siding contractors should use flashing and J-channel around the perimeter of the Door Unit just as they would with a window.
- Communication with the siding contractor is highly recommended to ensure a smooth installation.
- **ONE** Cat 5e run is required to operate the Door Unit.

- Untwist cable pairs but be sure to leave 1/2" twist in the pairs between the punchdown block and the start of the cable insulation



1/2" max untwisting

Figure 8 - Trim-Out Patio Unit(s)

(see **Figure 8**).

- As shown in the diagram, the Cat 5e cable must be terminated so that the cable is routed to the punchdown block so that the unit can be installed into a standard gang box while maintaining proper bend radius.
- Following T568A wiring color code, place the pairs firmly into their appropriate positions on the punchdown block. Ensure that the individual conductors are seated tightly enough to allow you to punch them down without having to hold them in place.
- Using a punchdown tool with a 110 style cutting blade, punch down each conductor firmly enough to allow any excess conductor to be cut away by the blade.
- Insert the Patio Unit and the Cat e5 cable into the 2 gang box and secure the unit to the box using the 4 included screws.

5. Door Unit(s)

The procedure to trim-out the Door Unit(s) is as follows:

- Make sure that the included weather proofing gasket is placed over the Door Unit circuit board and speaker before terminating the Cat 5e cable (see **Figure 9**).
- Locate the Cat 5e cable in the roughed in 2 gang box that you labeled as "Door Unit X" where X is the door unit number.
- Strip back approximately 2" of insulation from the Cat 5e cable.

- Insert the Room Unit and the Cat 5e cable into the 2 gang box and secure the unit to the box using the 4 included screws. Attach a 2 gang decor plate to the unit to complete the installation.
- Repeat these instructions for all the Room Units in your inQuire™ 1000 Intercom System.

3. Desktop Unit(s)

The procedure to trim-out the Desktop Unit(s) is as follows:

- Locate a Cat 5e cable in a roughed in 1 gang box labeled as "Desktop Unit X" (X is the Desktop Unit number).
- Strip approximately 2" of insulation from the Cat 5e cable.
- Untwist cable pairs but be sure to leave 1/2" twist in the pairs between the punchdown insert and the start of the cable insulation

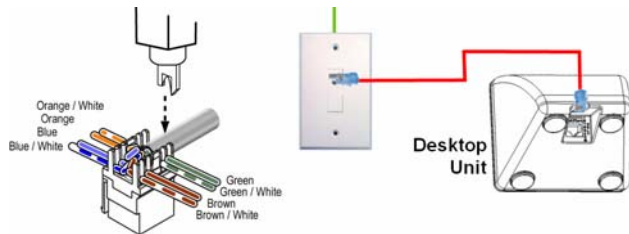


Figure 7 - Trim-Out Desktop Unit(s)

(see **Figure 7**).

- Following T568A wiring color code, place the pairs firmly into their appropriate positions on the punchdown insert. Ensure that the individual conductors are seated tightly enough to allow you to punch them down without having to hold them in place.
- Using a punchdown tool with a 110 style cutting blade, punch down each conductor firmly enough to allow any excess conductor to be cut away by the blade.
- Snap the insert into the wallplate or strap and secure them in the 1 gang box using the included screws. Attach a 1 gang plate (if necessary) to complete the installation.
- Plug the Desktop Unit into the installed Cat 5e outlet.
- Repeat these instructions for all the Desktop Units in your inQuire™ 1000 Intercom System.

4. Patio Unit(s)

The procedure to trim-out the Patio Unit(s) is as follows:

- Locate the Cat 5e cable in the roughed in 2 gang box that you labeled as "Patio Unit".
- Strip back approximately 2" of insulation from the Cat 5e cable.

- Run **ONE** Cat 5e cable from the 2 gang box directly to the enclosure where the Intercom Module will be installed. Label both ends of your cable run to indicate Door Unit number (ex: "Door Unit 1"). Follow the wiring guidelines listed in this manual to ensure a quality cable installation.
- Repeat these instructions for each and every Door Unit that will be installed in the system (maximum of 3).

NOTE: Up to three Door Units can be installed. The installation of a third Door Unit requires that you use the RJ45 jack that is labeled 12/DOOR 3. This will reduce the maximum number of Room Units that can be installed from 12 to 11.

6. Intercom Module and Door Chime

The rough-in of the On-Q Enclosure that will house the Intercom Module and Door Chime will need to be completed per the enclosure's installation instructions. There is no further rough-in work required for the Intercom Module and the Door Chime since these components will mount directly in the On-Q Enclosure during trim-out.

NOTE: The Door Chime mounts onto the back of the Intercom Module and does not require its own, separate enclosure space.

B. Final Wiring (Trim-Out)

The trim-out of the system should be completed after wall coverings have been finalized. The following section will instruct you on the proper methods to finish the installation of the various inQuire™ 1000 Intercom System components.

1. Main Console Unit

The procedure to trim-out the Main Console Unit is as follows:

- Locate the Cat 5e cable in the roughed in 3 gang box that you labeled as "Main 1".
- Strip back approximately 2" of insulation from the Cat 5e cable.
- Untwist cable pairs and place them next to each other in color-coded order according to the T568A standard and insert the wires into an RJ45 plug.
- Crimp the cable into the RJ45 plug with a proper RJ45 crimp tool.
- Plug the terminated "Main 1" cable into the RJ45 jack on the rear of the Main Console Unit "Main 1" (see **Figure 4**).

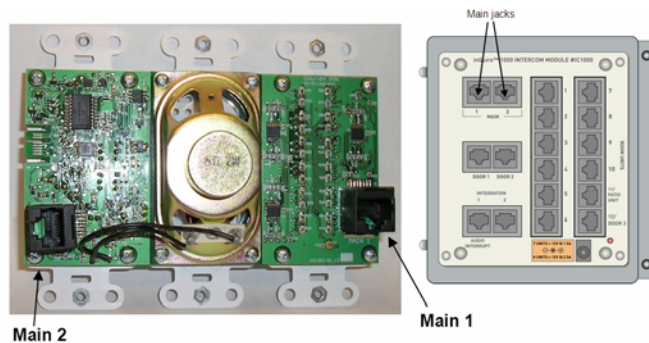


Figure 4 - inQuire™ 1000 Intercom System Trim-Out Phase

- Repeat the previous steps for the cable labeled "Main 2".
- Insert the Main Console Unit and the Cat 5e cables into the 3 gang box and secure the unit to the box using the 6 included screws. Attach a 3 gang decor plate to the unit to complete the installation.
- Terminate the other end of each labeled Cat 5e cable in the enclosure and plug the "Main 1" cable into the jack on the Intercom Module labeled "MAIN 1" and plug the "Main 2" cable into the jack on the Intercom Module labeled "MAIN 2".
- Once all Units have been trimmed-out, use the provided location labeling sheet (R1596) to label each location in the status section on the front of the Main Console (see **Figure 5**). This really helps make your system installation much more professional.

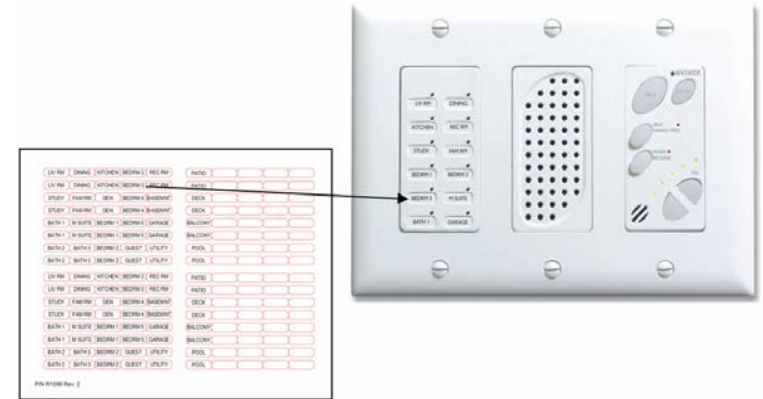


Figure 5 - Label Each Location on Main Console

2. Room Unit(s)

The procedure to trim-out the Room Unit(s) is as follows:

- Locate a Cat 5e cable in a roughed in 2 gang box labeled as "Room Unit X" (X is the Room Unit number).
- Strip approximately 2" of insulation from the Cat 5e cable.
- Untwist cable pairs and place them next to each other in color-coded order according to the T568A standard and insert the wires into an RJ45 plug.
- Crimp the RJ45 plug onto the cable with a proper RJ45 crimp tool.
- Plug the terminated "Room Unit X" cable into the RJ45 jack on the rear of the Room Unit (see **Figure 6**).



Figure 6 - Plug Room Cable into Room Unit