

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

This quick start guide provides, basic installation information, drawings, first time power-on instructions, and short descriptions of key terms and concepts for installing the EntraGuard Silver Telephone Entry controller. The EntraGuard Silver controller may be used alone or may be connected to a PXL-500/510 network. For instructions on how to install a postal lock, see the [EntraGuard Postal Lock Installation Application Note](#) (P/N 01964-001).

NOTE: It is the responsibility of the installation organization to have only technically qualified personnel performing the installation.

- Section 01 - Specifications
- Section 02 - Cable Requirements
- Section 03 - When Installing Controllers
- Section 04 - Wiring Instructions
- Section 05 - Communication
- Section 06 - Powering the Controller for the First Time
- Section 07 - Setup Controller
- Section 08 - General Information on Inputs
- Section 09 - General Information on Safety versus Security with Door Locks
- Section 10 - Contact Keri Systems

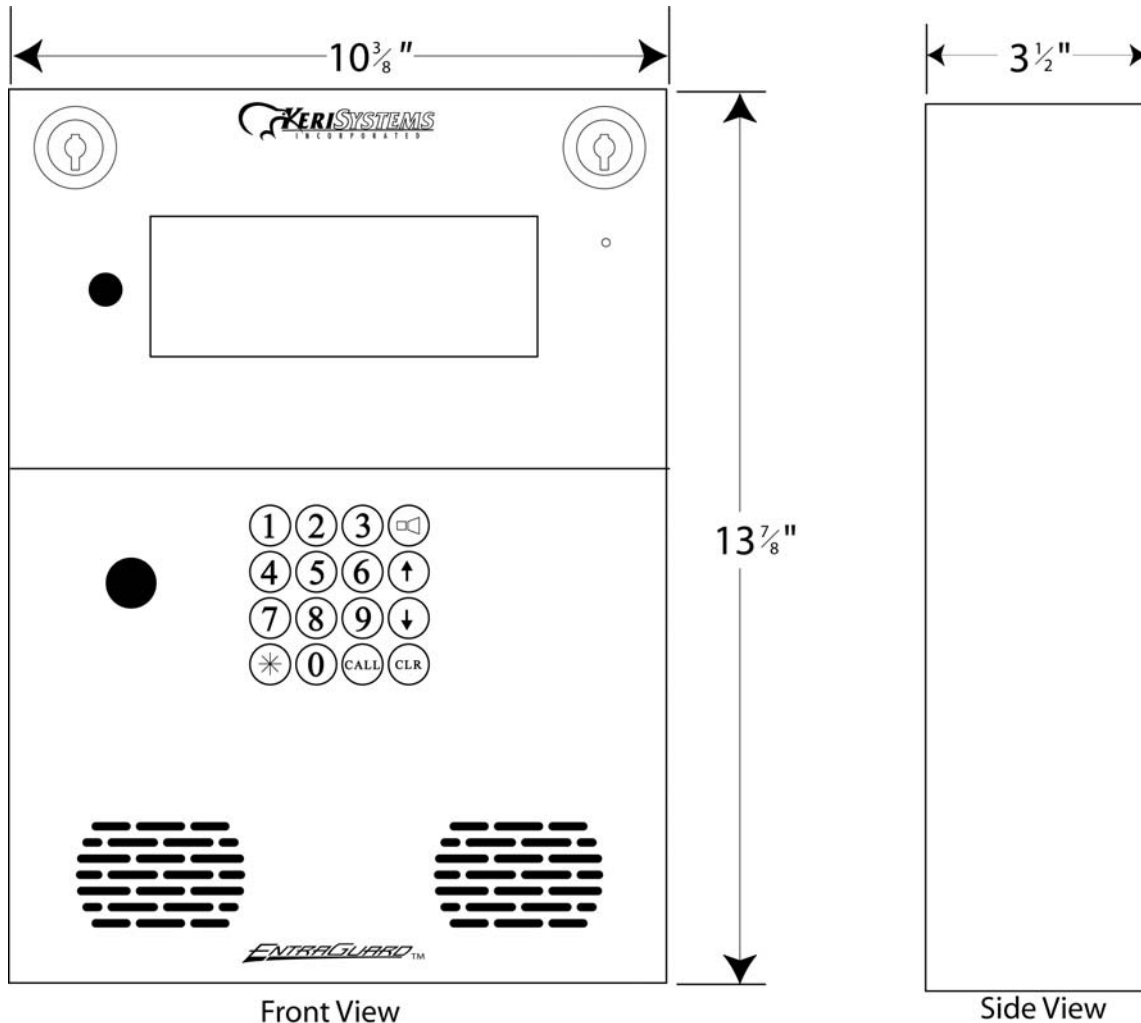


Figure 1: The EntraGuard Silver Telephone Entry Controller - Front Panel

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

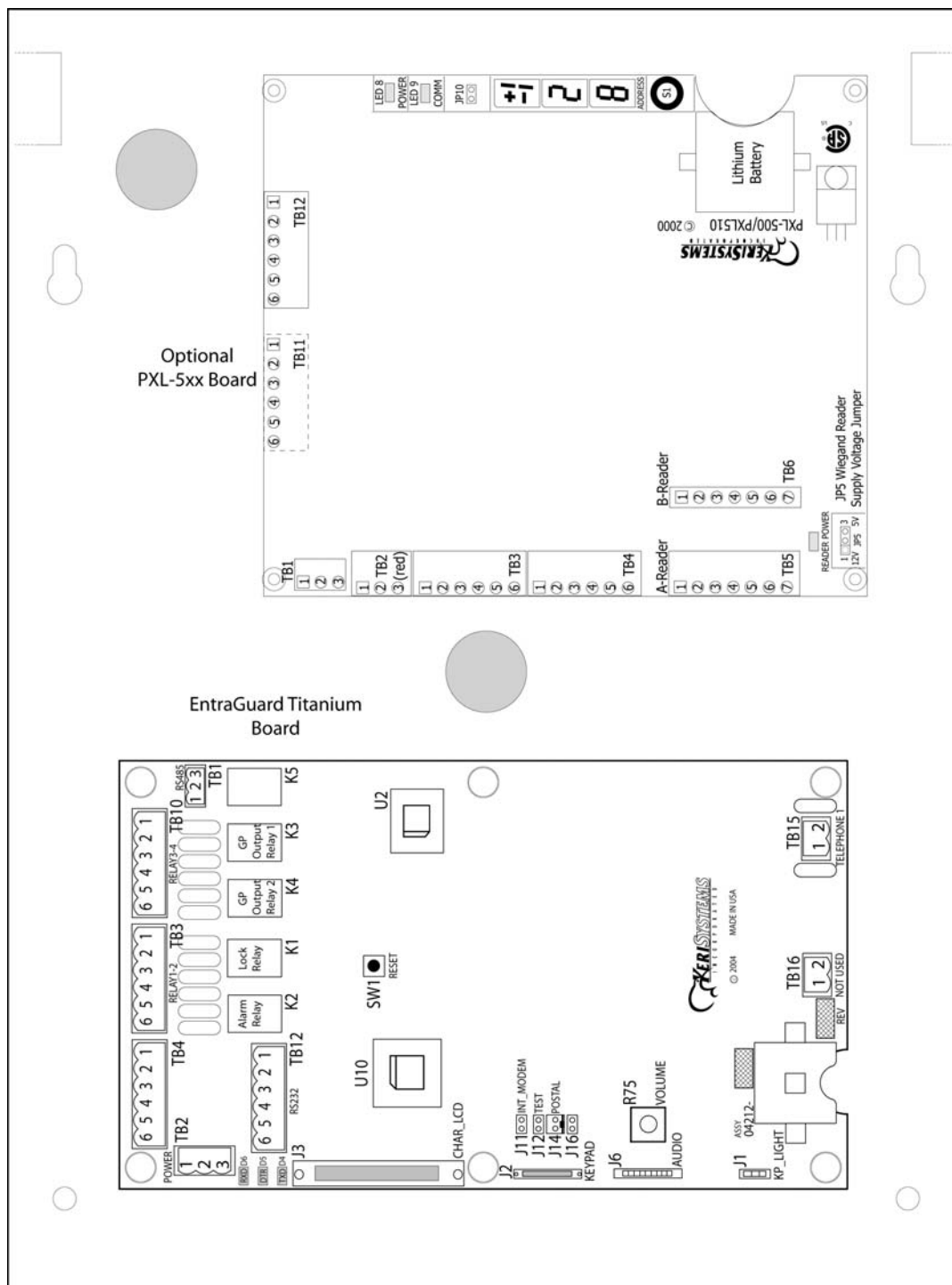


Figure 2: Silver and Optional PXL-5xx Board Placement

NOTE: For information on the optional PXL-500/PXL-510 board, see the [PXL-500/PXL-510 Quick Start Guide](#) (P/N 01918-001).

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

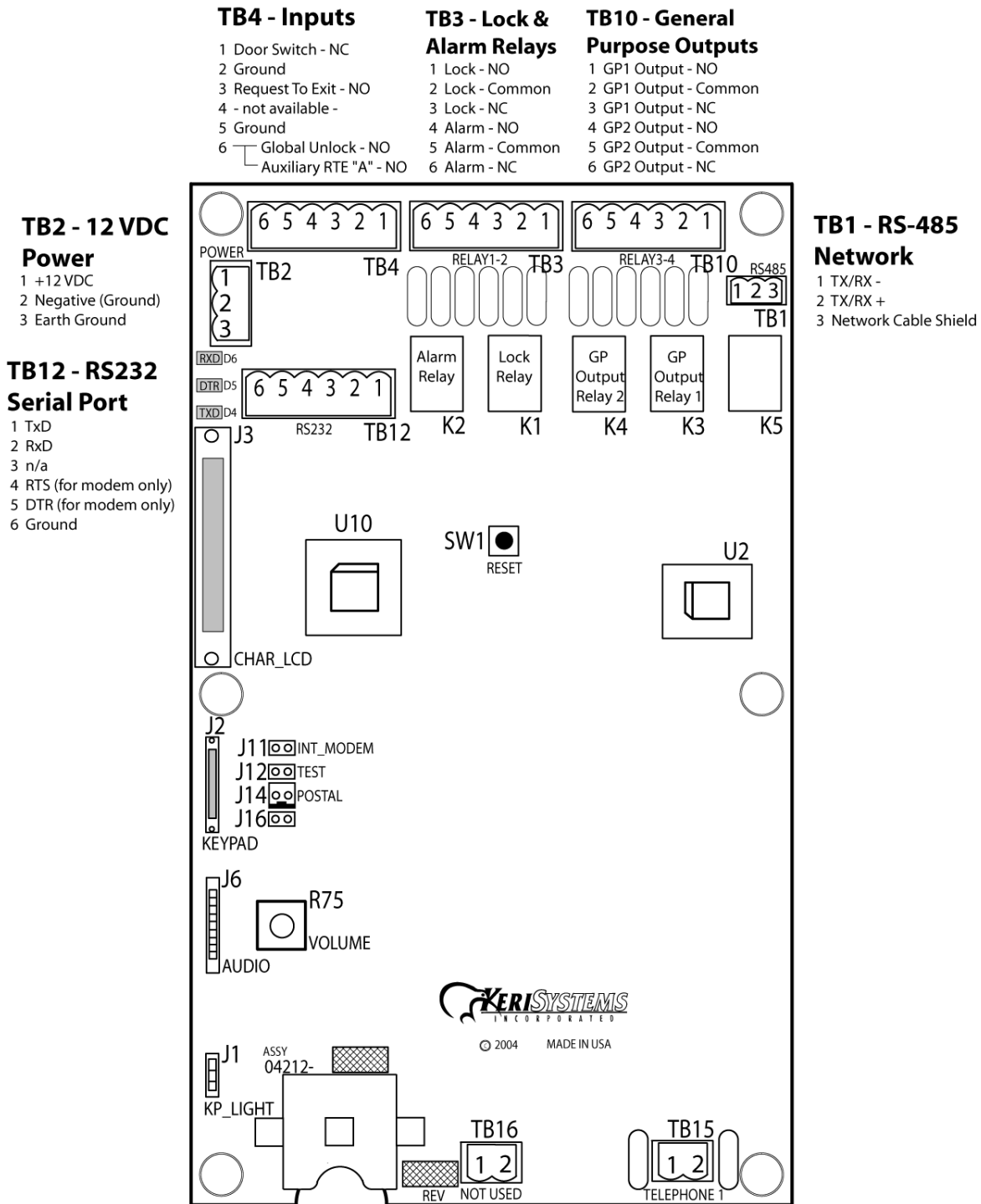


Figure 3: The Silver Telephone Entry Controller

NOTE: You must power down the unit before attempting to make or remove any connections. Failure to do so will damage the controller.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

1.0 Specifications

Unit Dimensions (nominal)

- 13 ⁷/₈ inches high by 10 ³/₈ inches wide by 3 ¹/₂ inches deep, including hinges
- (35 cm by 27 cm by 9 cm)

Operating Temperature/Humidity Range

- -20°F to 140°F (-29°C to 60°C)
- 0% to 90% Relative Humidity, non-condensing

Controller Power Requirements

- 12 VDC @ 1 A

Current Draw

- maximum current draw 750 mA for a controller

NOTE: If an electronic locking device (such as a magnetic lock, a door strike, or similar device) is to be driven by the same power supply as the EntraGuard Silver controller, please ensure the power supply provides enough current to drive every device connected to that supply plus an adequate safety margin. AC power cannot be used.

NOTE: Isolation of power supplies may be required with high transient situations.

Controller Memory Retention

- 5 year lithium battery back up to support controller RAM and real-time clock

Output Relay Contact Rating

- 1 Amp @ 24 VDC

Input Device Configuration - 3 Inputs

- | | |
|----------------------|------------------------------------|
| • Door Sense | normally closed |
| • Request to Exit | normally open |
| • Global Unlock | normally open (on master only), or |
| Auxiliary RTE A-Door | normally open |

Users Allowed

- 750 tenants maximum

Event Storage Capacity

- 3,640 events

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

2.0 Cable Requirements

RS-232 Serial Cable

- three conductor, shielded, stranded, AWG 24 wire (Belden 9533 or a larger gauge)
- 50 foot maximum length (per RS-232 industry specification - greater lengths are not recommended)

RS-485 Network Cable

- one twisted, shielded pair of conductors, stranded, AWG 24 wire (Belden 9501 or a larger gauge)
- 4,000 foot total network length (per RS-485 industry specification)
- extended network configurations are possible – refer to the Network Wiring Application Note (P/N 01824-002) for extended network configurations of up to 5,000 feet per star line and 16,000 feet total network length

Telephone

- 1 pair copper phone line

NOTE: *EntraGuard Silver is not to be used with a Centrex, PBX, or digital phone line. Only use a Plain Old Telephone Service (POTS) analog phone line.*

Input Power

- two conductor, stranded, AWG 18 wire (Belden 8461 or a larger gauge)

NOTE: *On long power cable runs, the cable resistance causes a drop in voltage at the end of the cable run. Be sure your power supply does provide 12 VDC at the end of the cable run.*

Earth Ground

- Single conductor, AWG 18 wire (or a larger gauge)¹

Input and Output Connections

- two conductor, stranded, AWG 22 (or a larger gauge)

NOTE: *The Lock Output relay may require a heavier gauge of wire depending upon the current demands of the lock and the length of the lock wiring run.*

NOTE: *If plenum cable is required, please reference the Belden plenum equivalent to the cables listed above.*

1. Ground wire is green, with or without yellow tracer.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

3.0 When Installing Controllers

DO

- since this is a telephone entry system at least one phone line will be necessary, it is important to plan ahead to meet power and telephone requirements for your system (if using a modem, the host computer will need 1 phone line, plus one for each master controller in each network or each EntraGuard unit)
- mount controllers in environmentally suitable areas - the EntraGuard Silver unit is weather resistant, but care should be taken to avoid areas of weather/temperature/humidity extremes
- mount the controller at least 3 feet away from the controller's power supply to prevent EMI radiated from the power supply from affecting the controller
- use the enclosure as a mounting template to mark drilling holes for permanent mounting
- note the locations of the knockouts in the enclosures and remove the appropriate knockout for the easiest cable routing into the controller
- route all controllers in a network in a single, continuous daisy-chain (with the EntraGuard Silver controller as the master)
- route cables in accessible areas for ease of maintenance
- connect all controllers to a quality earth ground¹
- add transient suppression across electric devices attached to a controller output
- use an isolation relay (P/N IRP-1) if attaching to a parking gate, a turnstile, or any application using a large electric motor
- verify the controller's supply voltage is 12 VDC – long power line runs cause a drop in voltage at the end of the run
- verify proper operation of the host computer's COM port or Ethernet/LAN WAN connection.

DO NOT

- make modem phone line connections through PBX telephone switching systems - most modems are not compatible with PBX systems leading to disconnection problems with the modem
- locate the EntraGuard Silver controller near EMI sources - EMI sources can affect the performance of the controller
- use switching power supplies - they are EMI sources
- route network cables beside power cables - transients on the power cables may be picked-up by network and reader cables
- stretch or over-tension cables
- route over sharp objects
- let the wires get tangled
- route the EntraGuard Silver controller as a slave to a PXL-250 master
- route all controllers in a network in spur, hub, or loop configurations
- connect earth ground¹ to the network cable shield - the EntraGuard Silver automatically connects earth ground to the shield at one point on the network to prevent ground loops
- use gender changer plugs when making RS-232 serial communication connections (unless you know it is a "straight-through" plug) - gender changers may have internal wiring changes that can disrupt communications

1. Ground wire is green, with or without yellow tracer.

EntraGuard® Silver Telephone Entry Control

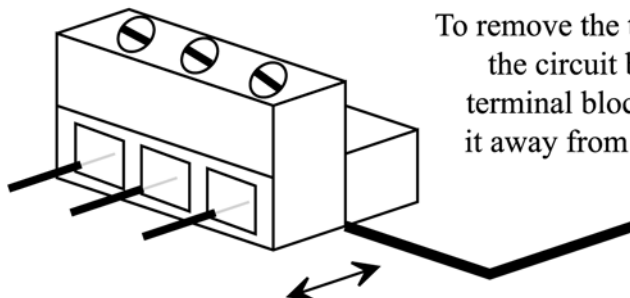
Quick Start Guide

4.0 Wiring Instructions

Refer to Figure 3 on page 3 for all wiring connections.

4.1 Terminal Blocks

Strip away 1/4 inch of insulation and place the wire in the appropriate slot.



To remove the terminal block from the circuit board, grasp the terminal block and gently pull it away from the circuit board.

Figure 4: Connecting Wires and Removing Terminal Blocks

NOTE: Screws on terminal blocks must be tightened securely.

4.2 Connecting the Earth Ground and the 12 VDC Power

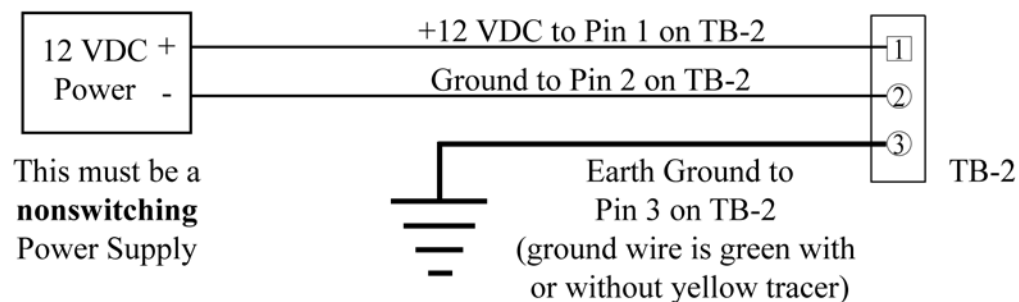


Figure 5: Earth Ground and 12 VDC Power Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

4.3 Connecting a Door Status Input

Each EntraGuard Silver controller is shipped with an installation kit including all necessary terminal blocks and transorbs. One of these terminal blocks has a jumper across pins 1 and 2. This terminal block is designated for use on TB-4. If a door switch is not used on the controller, this jumper prevents a continuous door open status alarm from being received by the controller. If a door switch is used, simply remove this jumper and install the door switch leads.

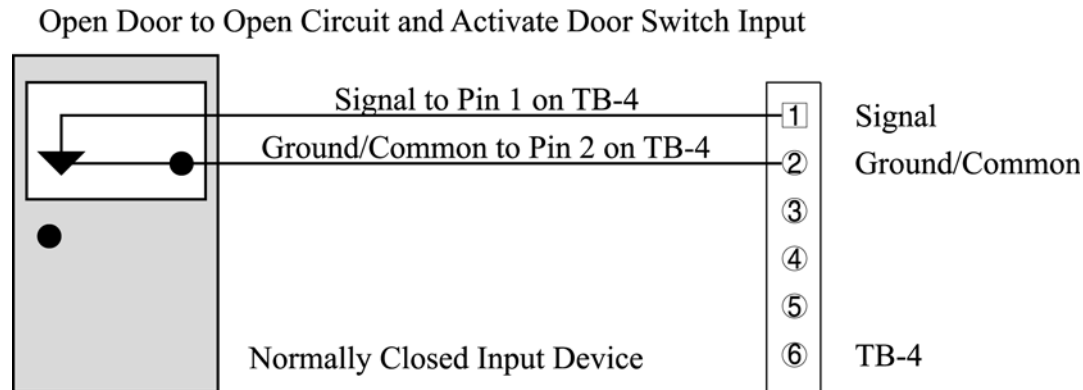


Figure 6: Door Status Input Connections

4.4 Connecting a Request to Exit (RTE) Input

Press Button to Close Circuit and
Activate RTE A-Door Input

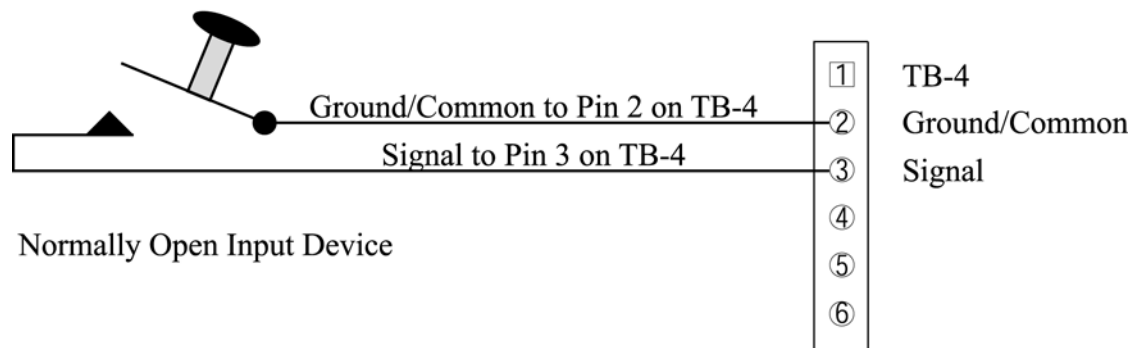


Figure 7: Request to Exit Input Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

4.5 Connecting a General Purpose Input

The general-purpose input is used in conjunction with the programmable input/output feature of the *Doors* access control software. There are two possible uses for the general-purpose input.

- the master controller may be configured for either Global Unlock (see Figure 8) or Auxiliary A-door RTE (see Figure 9)
- the slave unit can only be configured for Auxiliary A-door RTE (see Figure 9)

Make the following connections for a Global Unlock input. (For a master controller only.)

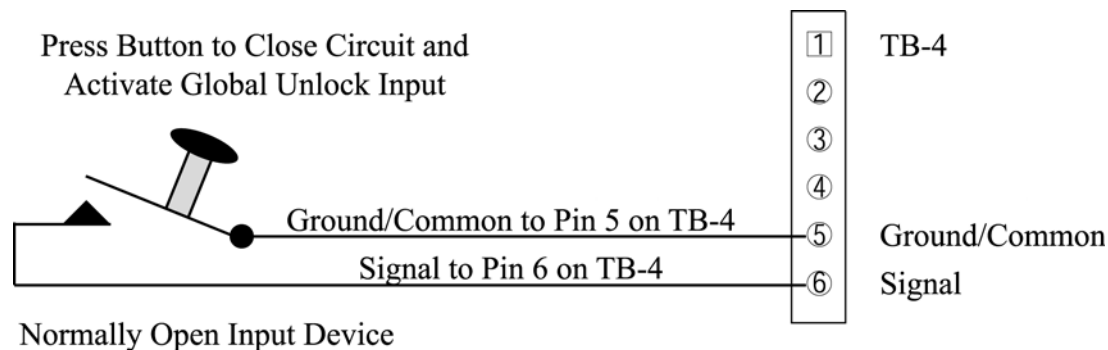


Figure 8: Global Unlock Input Connections

Make the following connections for an Auxiliary RTE A-door input.

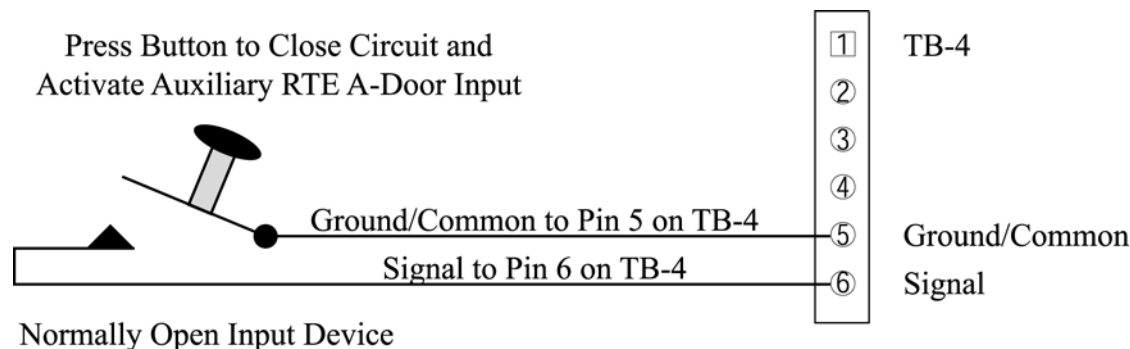


Figure 9: Auxiliary A-Door RTE Input Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

4.6 Connecting an Alarm Output Relay

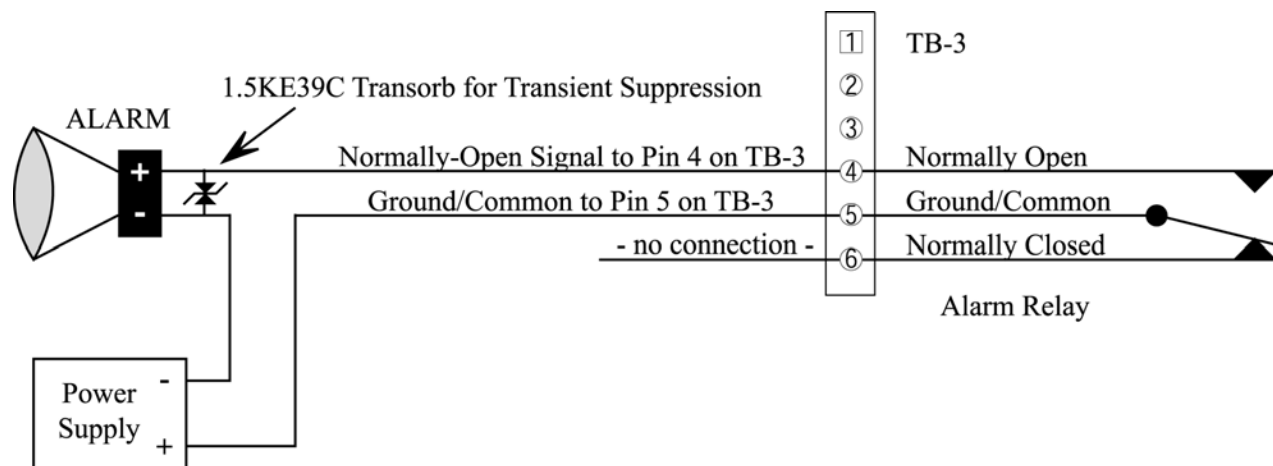


Figure 10: Alarm Output Relay Connections

4.7 Connecting a Fail-Safe Lock Output Relay

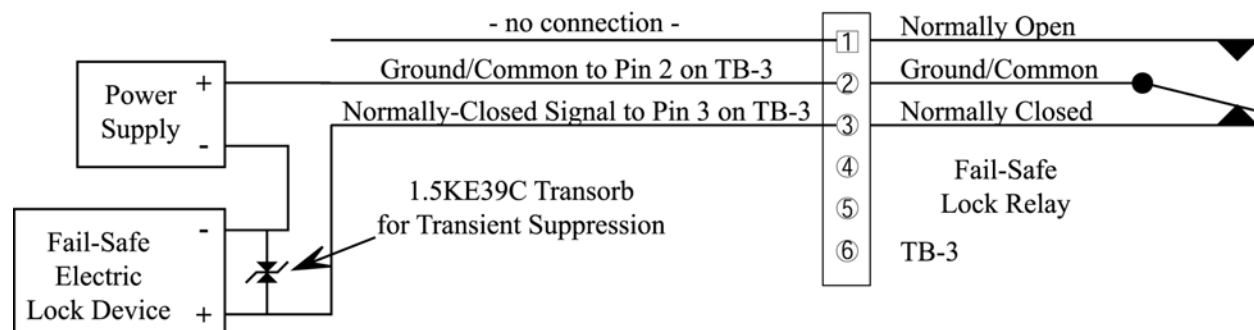


Figure 11: Fail-Safe Lock Output Relay Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

4.8 Connecting a Fail-Secure Lock Output Relay

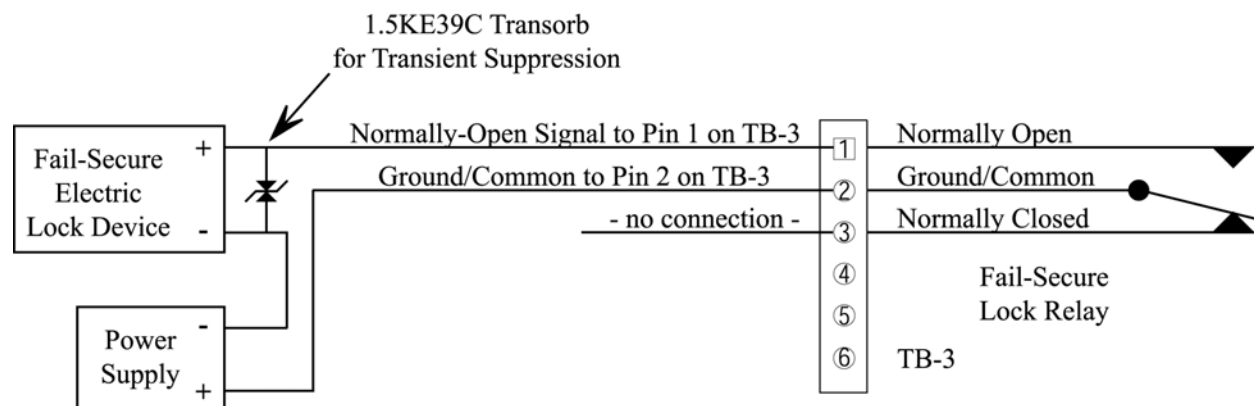


Figure 12: Fail-Secure Lock Output Relay Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.0 Communication

The communication section handles three different, but related, topics:

- Communication between EntraGuard Silver controller and tenants
- Communication between the master EntraGuard Silver controller and the host computer for programming
- Communication between networked EntraGuard Silver/PXL-500/510 controllers

NOTE: Keri Systems recommends performing a bench test on each unit prior to installation to rule out any phone line problems.

5.1 Between EntraGuard Silver Unit and Tenants

The telephone communication is done via a copper phone line to TB-15. Connect the TIP line to either Pin 1 or Pin 2 then connect the Ring line to the other Pin (see Figure 13).

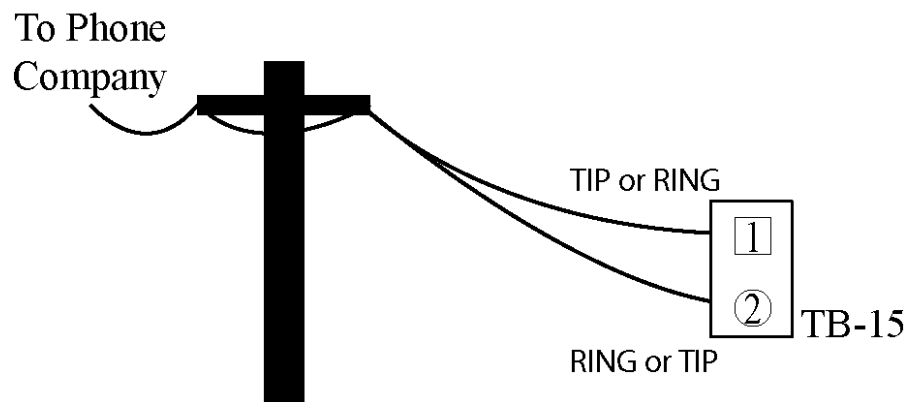


Figure 13: TB-15 Phone Line Wiring Connection

There are three ways of connecting the phone line for communication between the EntraGuard Silver unit and the tenants.

5.1.1 Single Phone Line for a Single EntraGuard Silver Unit

For a single EntraGuard Silver unit, connect the phone line to TB-15 on the EntraGuard Silver board (see Figure 3 on page 3).

5.1.2 Individual Phone Lines for each EntraGuard Silver Unit on a Network

The set up for individual phone lines for each EntraGuard unit is the same as for a single phone line for a single EntraGuard Silver controller. Each phone line is connected to TB-15 on each EntraGuard Silver board.

5.1.3 Shared Phone Line for Multiple EntraGuard Silver Units on a Network

A single phone line may be shared for communication between multiple EntraGuard Silver units and tenants. The phone line is plugged into TB-15 on the master EntraGuard Silver unit with the phone line then going out of the TB-15 phone plug to the next unit's TB-15 and so on to all the networked EntraGuard units (see Figure 14 on page 13).

NOTE: Sharing a phone line for multiple EntraGuard units is limited to a maximum of 6 units per phone line.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

Telephone Line

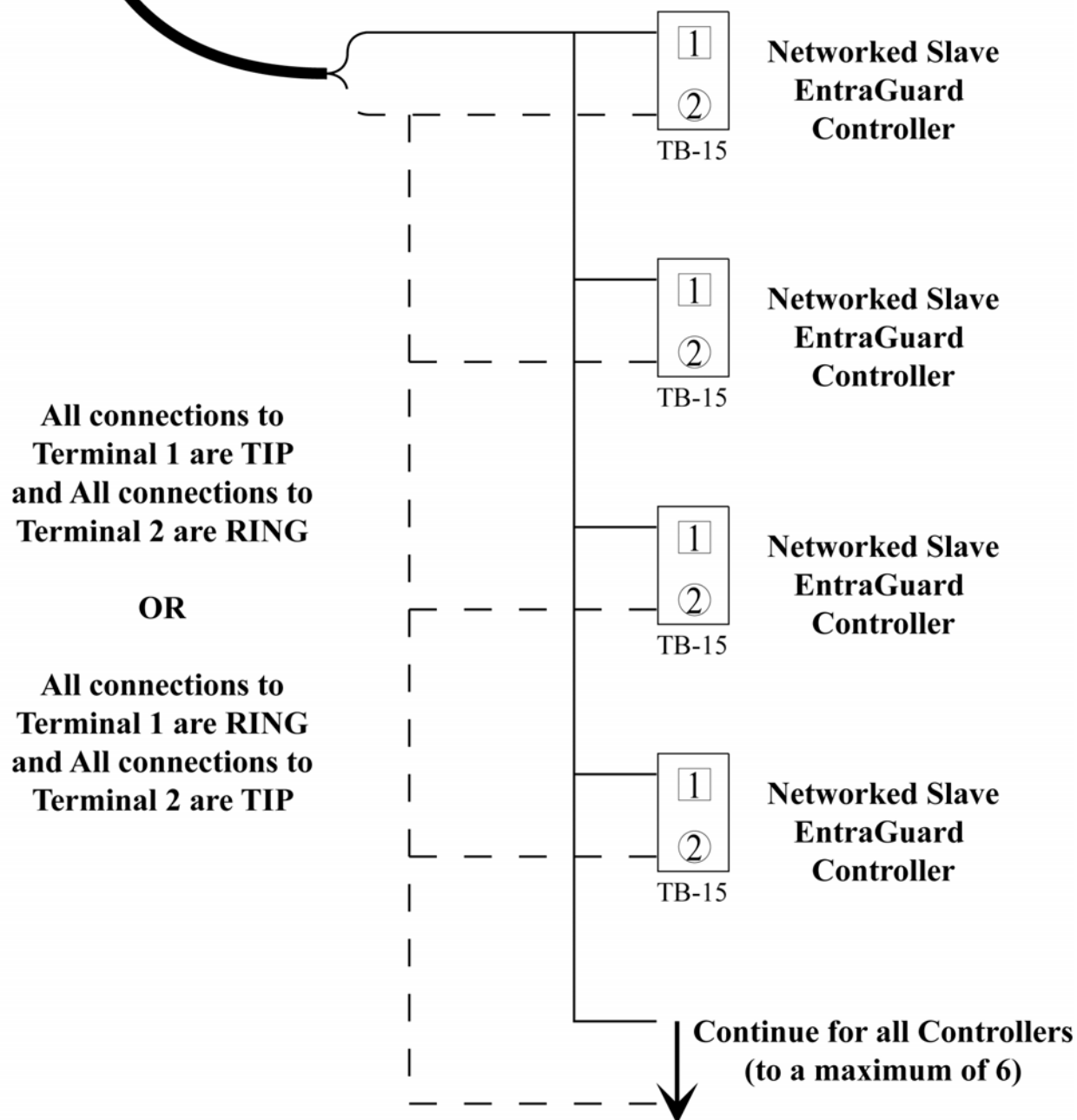


Figure 14: Single Phone Line for a Multiple EntraGuard Silver Unit Network

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2 Between EntraGuard Network and Host Computer

A communication link between the EntraGuard network and the host computer is provided via one of two ways.

- using the phone line connected to TB-15
- using the RS-232 serial port



NOTE: In order for monitor mode to work, the RS-232 serial port method must be used (see Section 5.2.2 on page 15).

5.2.1 Phone line (Internal Modem)

The EntraGuard Silver controller's internal modem may be used for communication between the master controller and an external modem¹ connected to the host computer. To use the EntraGuard's internal modem, attach the phone line to TB-15 located on the master controller's board (see Figure 3 on page 3).

NOTE: If you are using two separate phone lines, one for communication with the tenants and one for programming, you will not be able to use the internal modem for programming and must use an external modem connected to the RS-232 as described in Section 5.2.2.2 on page 17.

Once the phone line has been attached, the J11 jumper must be set for proper operation. When using TB-15 phone line connection for communication with the host computer, place the jumper on the INT_MODEM jumper (see J11 on Figure 3 on page 3).

The *Doors* software must also be configured for using the internal modem. In the *Doors* software, click on the  button, then select the **Network Config** tab. In the "Modem Init String" field type in **AT&K0**² (see Figure 15). Click on the  button.

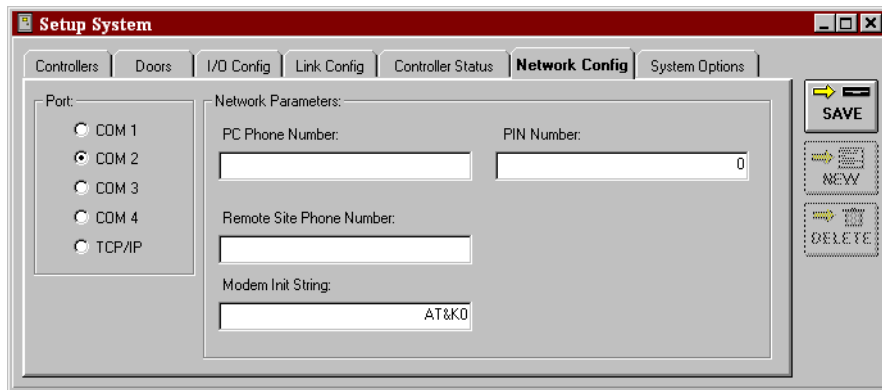


Figure 15: Modem Init String Set

NOTE: For wiring of an external modem to the host computer, see Section 5.2.3 on page 19.

1. You must use a Keri Systems modem for proper communication.
2. Although it is not necessary to enter this code with every type of modem, Keri Systems recommends you enter it in all situations for proper communication between the master controller and the host computer.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2.2 RS-232 Serial Port

Using the RS-232 serial port for communication between the EntraGuard unit and the host computer may be done one of two ways:

- by direct connect
- through an external modem.

For either of these options, the INT_MODEM J11 jumper should not have a jumper across it. Verify there is no jumper set across J11 (see Figure 3 on page 3) when using the RS-232 serial port for communication.

NOTE: Do not use male/female gender changer plugs or 25-pin to 9-pin adapters when making RS-232 serial port connections. These devices may have internal wiring changes that can disrupt communications when implemented in conjunction with the Keri Systems serial wiring instructions. If you must use a gender changer plug, ensure it is a "straight-through" plug.

NOTE: When using 56K modems to communicate with remote access control networks, all modems must use the same communication format - either X2 or Flex. Incompatibilities between the two formats make some modems of one format incapable of reliable communication with modems of the competing format. Modems using the V.90 specification are compatible regardless of whether they are from an X2 or Flex manufacturer.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2.2.1 Direct Serial Connection – Controller to PC

To make the connection between the EntraGuard master controller and the host computer you will use one cable.

- If the host computer has a male DB-9 connector on the serial port, you must use a Keri Systems KDP-252 cable or create a cable according to the drawing in Figure 16.
- If the host computer has a male DB-25 connector on the serial port, you must use a Keri Systems KDP-251 cable or create a cable according to the drawing in Figure 17 on page 16.

The Keri Systems part number for this cable is KDP-252.

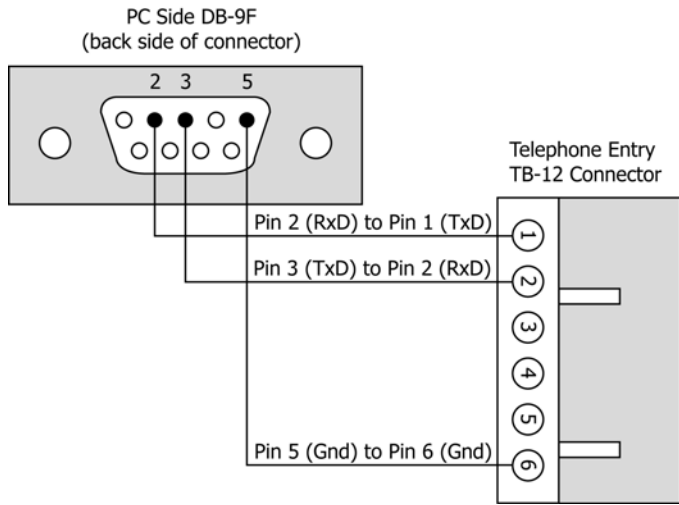


Figure 16: PC/DB-9F to Telephone Entry/TB-12 RS-232 Direct Serial Connections

The Keri Systems part number for this cable is KDP-251.

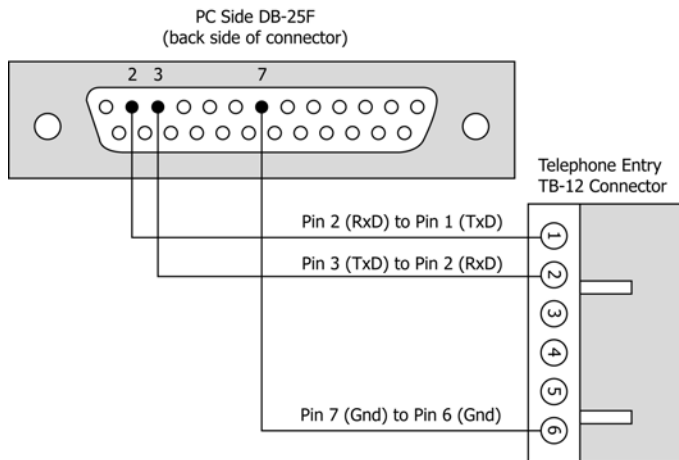


Figure 17: PC/DB-25F to Telephone Entry/TB-12 RS-232 Direct Serial Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2.2.2 Modem to Controller

To make the connection between the master controller and the host computer you will use two cables: one between the host computer and its modem (see Section 5.2.3 on page 19), and one between the master controller and its modem.

- If the modem has a female DB-25 connector, you must use a Keri Systems KDP-336 cable or create a cable as shown in Figure 18.
- If the modem has a female DB-9 connector, you must create a cable as shown in Figure 19.
- If the modem was purchased from Keri Systems, it comes with an adapter that accommodates a female DB-9 connector (should the modem have a DB-9 instead of a DB-25 connector). Use this adapter cable in conjunction with a KDP-336 cable to make the modem/controller connection. See Figure 20 on page 18.

The Keri Systems part number for this cable is KDP-336.

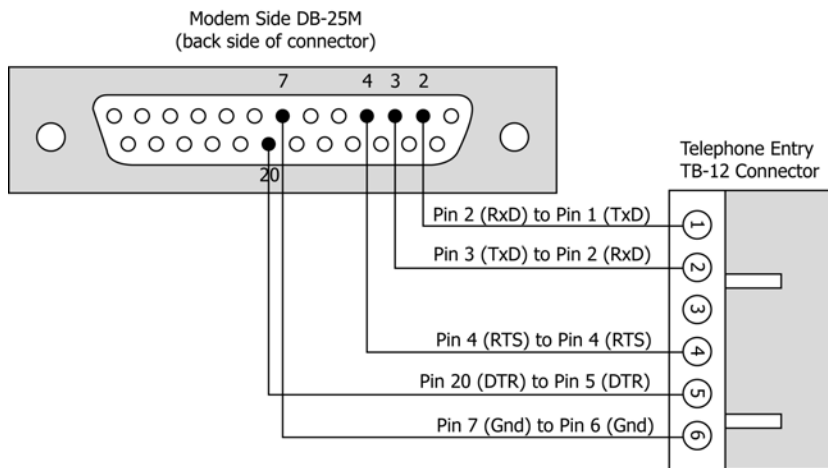


Figure 18: Modem/DB-25M to Telephone Entry/TB-12 Serial Port Connections

The Keri Systems part number for this cable is KDP-929M.

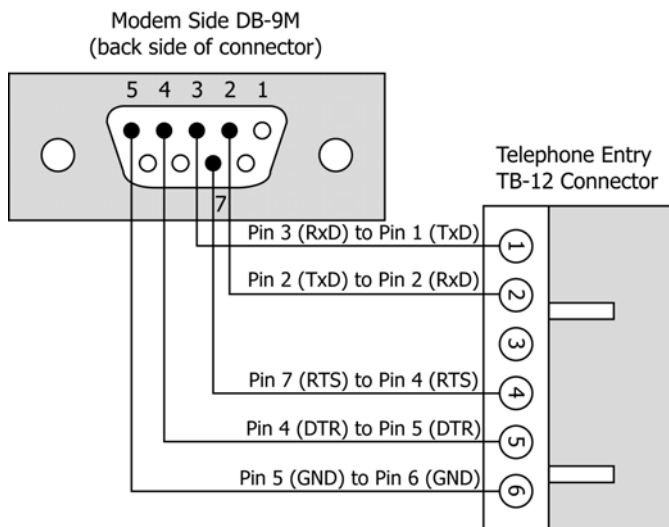


Figure 19: Modem/DB-9M to Telephone Entry/TB-12 Serial Port Connection

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2.2.3 Modem Cable Connection

- An adapter cable is provided, when needed, with a modem purchased from Keri Systems. Connect the adapter cable between the modem and the KDP-336 cable as shown in side A of Figure 20.
- To use the KDP-929M cable see side B of Figure 20.

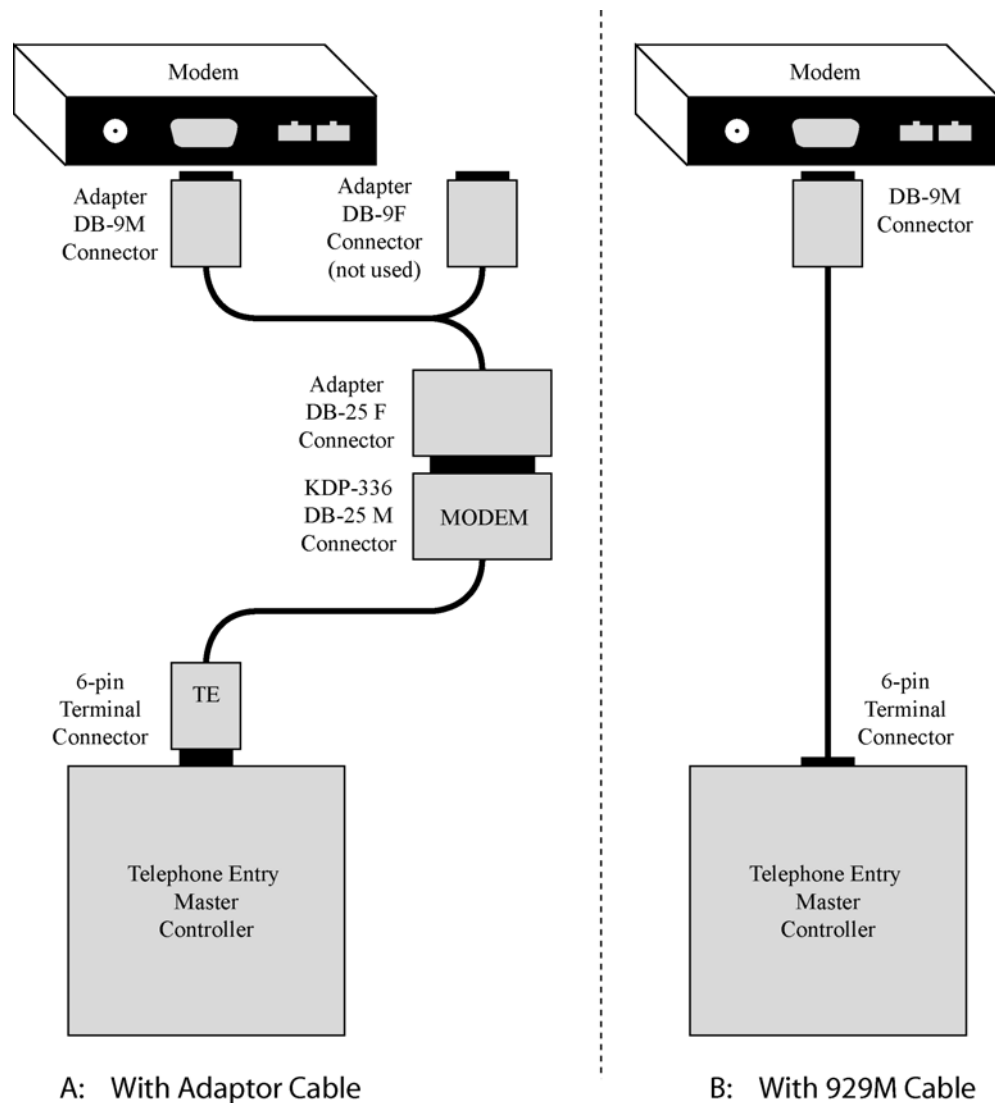


Figure 20: Modem Cable Connection

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.2.3 Modem to PC Serial Connection

Keri Systems does not provide this cable. It is an off-the-shelf item from any computer supplier or electronics store, and its configuration is dependent upon the configuration of the serial port on the host computer. Based on the serial port, there are four possible cables.

- If the modem has a male DB-25 connector and the host computer's serial port has a female DB-9 connector, purchase or create a cable as shown in Figure 21.
- If the modem has a male DB-25 connector and the host computer's serial port has a female DB-25 connector, purchase or create a cable as shown in Figure 22.
- If the modem has a male DB-9 connector and the host computer's serial port has a female DB-9 connector, purchase or create a cable as shown in Figure 23 on page 20.
- If the modem has a male DB-9 connector and the host computer's serial port has a female DB-25 connector, purchase or create a cable as shown in Figure 24 on page 20.

NOTE: Keri Systems requires using modems from the same manufacturer at both the host computer and the access control network. This eliminates the possibility of incompatibilities between modems from two different manufacturers from affecting the communication between access control network and host computer. Keri Systems cannot be held responsible for problems caused by incompatibilities between modems from two different manufacturers.

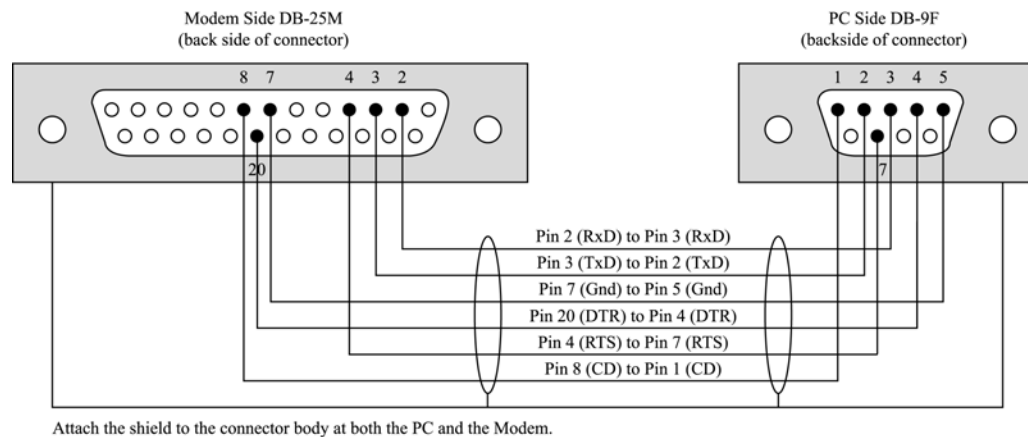


Figure 21: Modem/DB-25M to PC/DB-9F PC Serial COM Port Connection

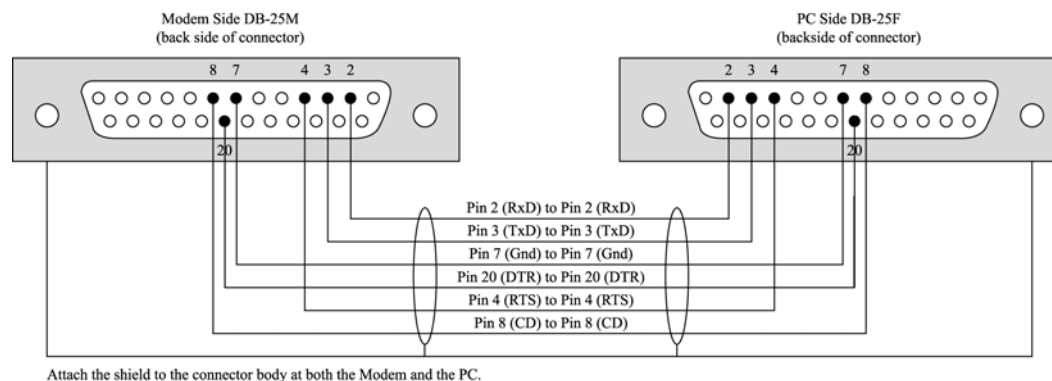
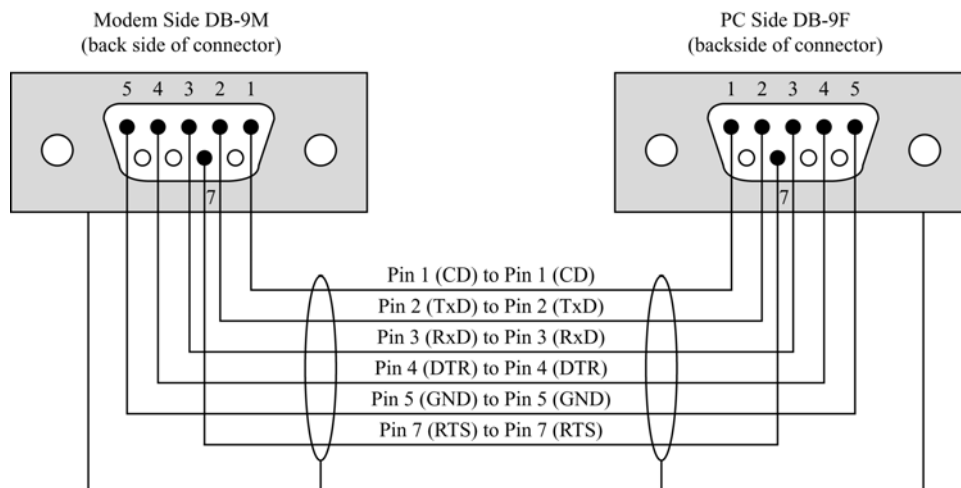


Figure 22: Modem/DB-25M to PC/DB-25F PC Serial COM Port Connection

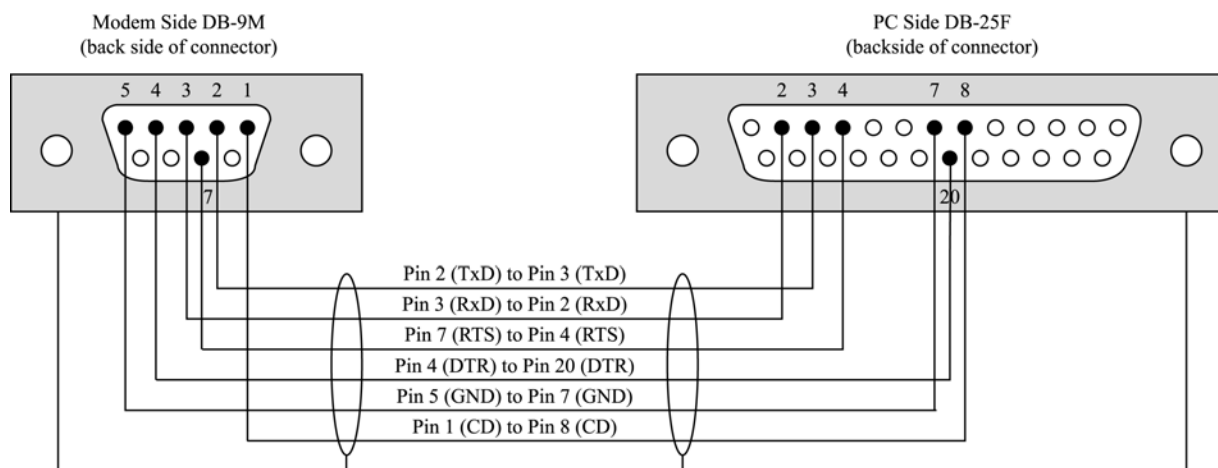
EntraGuard® Silver Telephone Entry Control

Quick Start Guide



Attach the shield to the connector body at both the PC and the Modem.

Figure 23: Modem/DB-9M to PC/DB-9F PC Serial COM Port Connection



Attach the shield to the connector body at both the PC and the Modem.

Figure 24: Modem/DB-9M to PC/DB-25F PC Serial COM Port Connection

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

5.3 Network Communication

5.3.1 RS-485 Access Control Network Connection

The following figure shows how to connect more than one controller to the access control network.

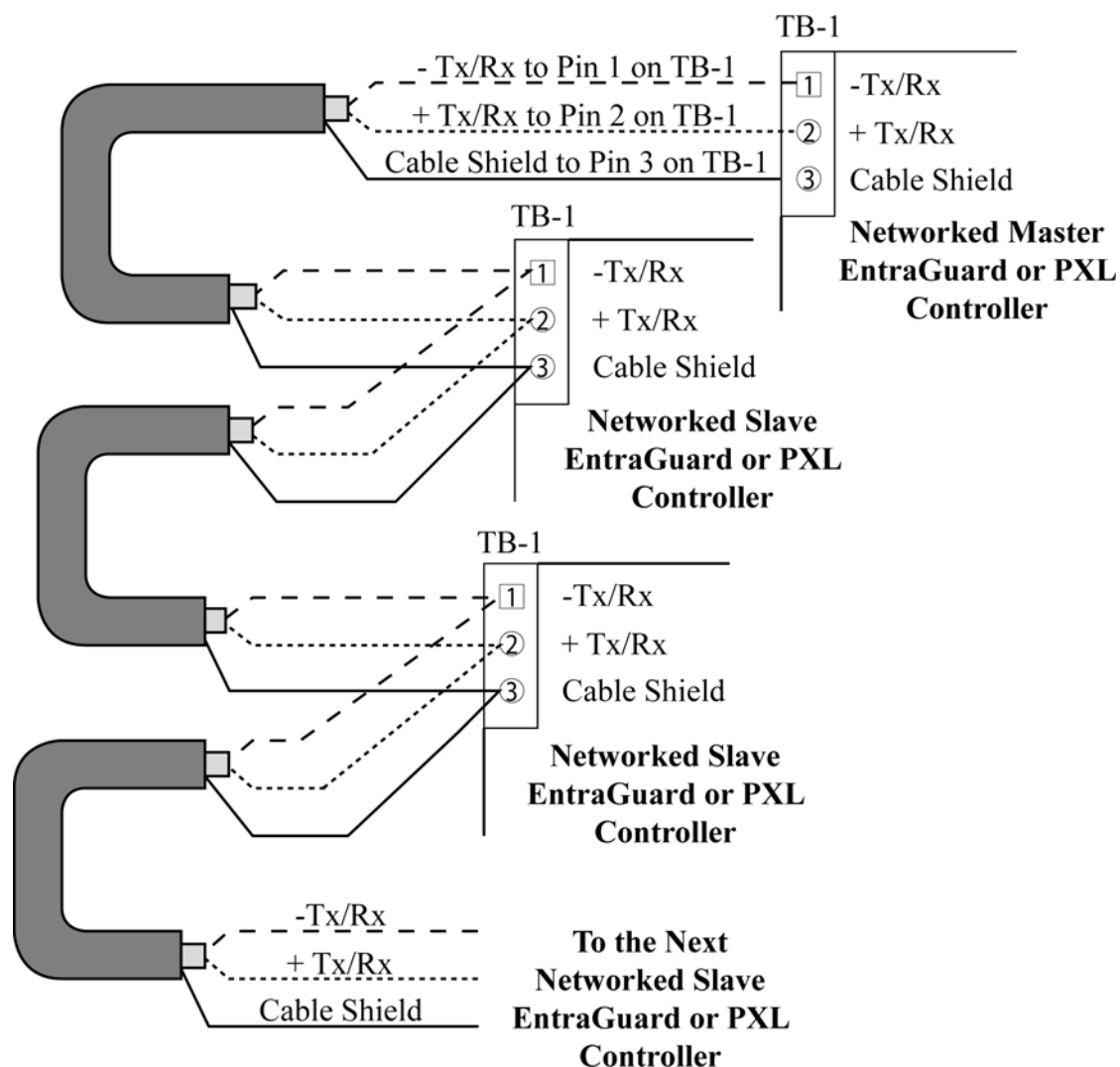


Figure 25: RS-485 Network Connections

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

6.0 Powering the Controller for the First Time

NOTE: Verify the earth ground has been connected at pin 3 of TB-2 before turning the power on for the first time.

6.1 Verify the 12 VDC Supply Voltage

To verify the 12 VDC supply voltage:

1. Turn system power on.
2. Set the DVM to a DC volt scale capable of reading 12 VDC.
3. Place the Red DVM lead on Pin 1 of TB-2.
4. Place the Black DVM lead on Pin 2 of TB-2.
5. Check the DVM reading. It should read +12 VDC +/- 2 volts.

If the DVM does not read 12 VDC (+/- 1.5 V), verify the power supply is of the correct voltage, verify the cable length does not exceed 200 feet, and verify the cable gauge is AWG 18.

NOTE: On long power cable runs, keep in mind the resistance in the cable itself causes a drop in voltage at the end of the run. The power supply must be able to account for this voltage drop.

7.0 Setup Controller

If you're turning system power on for the first time, certain tasks must be performed prior to entering access control information from *Doors*. On the EntraGuard Silver main board (see Figure 3 on page 3), hold the Reset Button (SW1) down and turn the controller's power on. After the controller beeps once, indicating the controller's firmware is ready for programming, release the SW1 button. The LCD on the front panel will display the Reset Menu (see Figure 26). From this menu you may perform different tasks such as set the controller's address, clear the controller's memory, set the microphone gain, and check diagnostics.

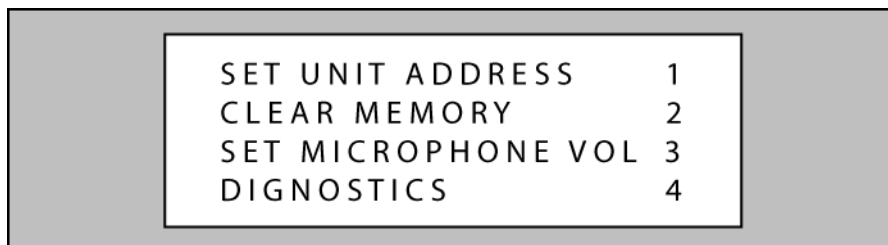


Figure 26: Reset Menu

NOTE: If no keys have been selected within 60 seconds, the unit will time out and go directly to the default message. In order to reach the Reset Menu, the unit must be powered up again.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

7.1 Set Unit Address

The controller's address may only be set through the Reset Menu. Once you have performed the necessary steps to reach the Reset Menu as described above, if the EntraGuard Silver unit has an alpha/numeric keypad, the keypad will default to the numeric keypad (if the alpha keypad is lit instead, press the #/A key to return to numeric mode). To set the desired operating address for the controller, press 1 on the keypad. The Set Panel Address screen appears on the LCD (see Figure 27).

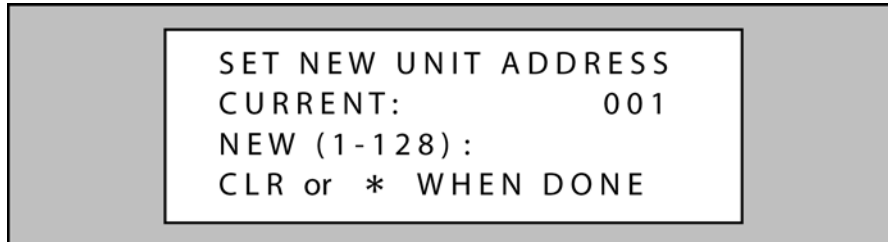


Figure 27: Set Unit Address

The address range is from 1 to 128. The Master Controller must be set to address 1. Other slave EntraGuard/PXL-500/510 controllers may be assigned any number from 2 to 128. If the network is made up of PXL-250s, the EntraGuard Silver must be set as the Master.

If the address shown as Current is correct, you may either enter the same address and press *, or just press * to return to the reset menu. If you do not enter a new address, or enter the same address that is already assigned to this unit, you will need to clear the memory separately (see “Clear the Controller’s RAM” on page 25).

NOTE: Changing the address of an EntraGuard Silver controller completely erases all information within the controller. It is vitally important that you collect all data from the controller before changing the address. Once the address is changed (and the RAM is automatically cleared) the information in the controller is lost and cannot be recovered.

If the address shown as Current needs to be changed, enter the new address by pressing the numbers on the keypad. The number selected will show in the New line. If you enter the wrong number, simply press CLEAR to erase what has been entered. When you are satisfied with the address entered, press *. If you have changed the number from what is shown as Current, the controller will automatically clear the memory as it changes the address (see Figure 28).



Figure 28: Clearing Memory

Once the memory has been cleared, the unit is ready to be configured. The LCD will display a warning that the unit has not been initialized (see Figure 29 on page 24). This display will rotate with the EntraGuard Default display (see Figure 30 on page 24) until a Total Update from *Doors* has been performed on the unit. Once an update has been performed, only the default will be displayed.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

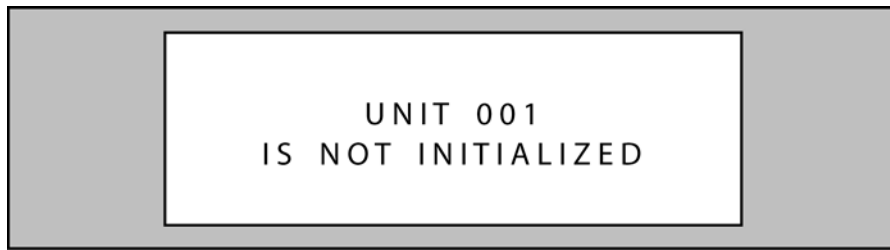


Figure 29: Not Initialized Unit Warning

NOTE: Any time the “Not Initialized Unit Warning” appears on the LCD display, the unit needs a Doors update.

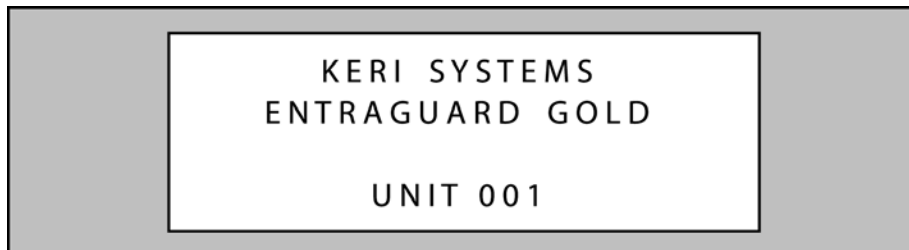


Figure 30: EntraGuard Silver Default LCD Display

NOTE: The default display will remain until a message banner has been created (for instructions on how to create a message banner see the [Doors Users Guide](#) - P/N 01914-100). Doors treats the Entraguard Gold and Entraguard Silver the same, so this message will show the EntraGuard Gold banner in an Entraguard Silver unit.

7.1.1 The Master Controller¹

The Master Controller must be set to address 1 so that all slave controllers on the access control network can identify the master controller. For the Master Controller to correctly identify all slave controllers on the network, one of two things must be done.

1. The master controller must be the last unit on the network to be powered on. This ensures that when the Master Controller begins polling the network to see what slave units are connected for system configuration, all slave units are ready to communicate their unique addresses and their configuration information.
2. The Auto-Configuration routine within the *Doors* program must be run. This instructs the Master Controller to poll all controllers on the network for addresses and configuration information.

NOTE: An auto-configuration must be performed any time changes are made to the 485 network.

1. The EntraGuard Silver Controller **must** be installed as the Master Controller **only** in a mixed EntraGuard/PXL-250 network.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

7.2 Clear the Controller's RAM

When turning system power on for the first time, the controller's memory needs to be cleared of any spurious information that may be in the RAM. If you changed the controller address, the memory is automatically cleared. However, if you did not change the address, you will need to clear the controller's RAM separately. From the Reset Menu (see Figure 26 on page 22), press 2 to Clear Memory. The Clear Memory screen will appear on the LCD (see Figure 31).

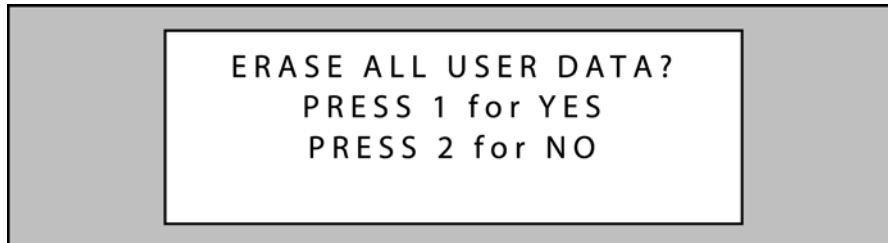


Figure 31: Clear Memory

From the Clear Memory Screen you may either:

1. Press 1 to clear the controller's RAM. The LCD will change to show the memory is being cleared (see Figure 28 on page 23). Once the controller's RAM has been cleared, the unit is ready for use. The LCD will rotate between the Initialization Warning and EntraGuard Default screens (see Figure 29 on page 24 and Figure 30 on page 24) until a Total Update from *Doors* has been performed on the unit.

or

2. Press 2 to return to the Reset Menu without clearing the controller's RAM.

NOTE: Clearing the system RAM completely erases all information within the EntraGuard Silver controller, except for the controller address. If there is any information in system RAM from an access control installation and the system RAM is cleared, the information in the controller is lost and cannot be recovered.

7.3 Set Microphone Volume

When turning system power on for the first time, the microphone volume should be left as it has been set in the factory. However, if the microphone volume needs to be changed, see the "Set Microphone Volume" section in the [EntraGuard Troubleshooting and Diagnostics Guide](#) (P/N 01912-001).

7.4 Diagnostics and Troubleshooting

For information regarding the diagnostics screens and troubleshooting the EntraGuard Silver Controller, see the [EntraGuard Troubleshooting and Diagnostics Guide](#) (P/N 01912-001).

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

8.0 General Information on Inputs

A controller input detects a state change generated by a device outside the controller that may prompt a response from the controller. Input devices that generate a state change may be normally closed or normally open. This section provides a brief description of normally closed versus normally open inputs.

8.1 Normally-Closed

A normally closed input device continually keeps a circuit active or complete. A state change is generated when the normally closed input device is forced open, breaking the circuit. In an access control system, a door switch is a typical example of a normally closed device. While the door remains closed, the switch remains closed. When someone opens the door, the door switch is opened, breaking the circuit and generating a state change. The controller then responds to the state change and generates an output (such as sounding an alarm if the door is a secure door).

8.2 Normally-Open

A normally open input device continually leaves a circuit open, or incomplete. A state change is generated when the normally open input device is forced closed, completing the circuit. In an access control system, a request-to-exit (RTE) button is a typical example of a normally open device. In an access control installation, an RTE button is located on the secure side of a door. While there is no one there pressing the button, the switch remains open. When someone desires to exit through a secure door, they press the RTE button, closing the circuit and generating a state change. The controller then responds to this state change and generates an output (such as unlocking the door to allow egress).

9.0 General Information on Safety versus Security with Door Locks

When installing a door lock there are two things to consider: safety versus security, or should the door be “fail-safe” or “fail-secure”.

9.1 Fail-Safe Door Lock

Fail-safe means that if the power should fail at a door (perhaps due to a power outage or equipment failure), the door will automatically unlock allowing entrance or egress. Power is required to keep the door locked. A fail-safe door ensures people will be able to enter and exit a secured area through that door in the case of an emergency. A typical fail-safe application may use a magnetic lock. In this application, the controller energizes the lock relay, causing the lock relay to change its state. In its new state the normally closed circuit is opened breaking the power to the magnetic lock and allowing the door to be opened.

9.2 Fail-Secure Door Lock

Fail-secure means that if the power should fail at a door (perhaps due to a power outage or equipment failure), the door will automatically lock and not allow entrance but will continue to allow egress. Power is required to unlock the door. A fail-secure door ensures a secured area remains secure regardless of the situation. A typical fail-secure application may use a door strike. In this application, the controller energizes the lock relay, causing the lock relay to change its state. In its new state the normally open circuit is closed activating the release mechanism for the door strike on the door to be opened.

EntraGuard® Silver Telephone Entry Control

Quick Start Guide

10.0 Contact Keri Systems

Keri USA	Keri UK, Ireland, Europe
2305 Bering Drive San Jose, CA 95131	Unit 17 Park Farm Industrial Estate Ermine Street Buntingford Herts SG9 9AZ UK
Telephone: (800) 260-5265 (408) 435-8400	Telephone: + 44 (0) 1763 273 243
Fax: (408) 577-1792	Fax: + 44 (0) 1763 274 106
Web: www.kerisys.com	Web: www.kerisystems.co.uk
E-mail: sales@kerisys.com techsupport@kerisys.com	E-mail: sales@kerisystems.co.uk tech-support@kerisystems.co.uk

End of document.