Telephone Entry Controller Architectural Specification
Mechanical Keypad

This document has been prepared to assist design professionals in the preparation of project or office master specifications for telephone access control systems. Modify this document as necessary and delete items that are not applicable.

I.   General Description:

A. The telephone entry controller shall be designed to communicate over ordinary, voice-grade telephone lines or no phone line/bill system. A visitor shall be able to call a resident's telephone via a directory and keypad to gain access through a locked gate or door. The tenant shall be able grant access to the visitor by pressing a key on the tenant's telephone. The controller shall have nonvolatile memory to manage 750 user telephone numbers and store 3,640 event transactions.

1. The controller can operate either as a single access point or be fully integrated within an access control network consisting from one to 256 access points.
2. Up to ten telephone entry controllers shall be able to share one telephone line.
3. Programming will be accomplished through a PC.
4. The controller shall be equipped with a standard RS-232 protocol for direct and remote communication via a computer and a two-wire, half-duplex, RS-485 communication protocol for communicating with access control entry points within the network.
5. The controller shall use a LCD screen for a tenant directory and message indicator.
6. The controller shall utilize a touch-tone dialing method.
7. Hands-free voice communication shall be standard with the option to equip the controller with a standard telephone handset.
8. The controller enclosure construction shall be weather resistant.
9. Package design will allow surface or flush mounting or mounting within a hooded back box.
10. If the controller is using a modem, the modem shall communicate at 9600 BPS.
11. When connected to a PC, the controller shall contact the host and upload the contents of the controller's buffer when the buffer reaches a pre-programmed percentage of its event database memory capacity. Should the communication connection be broken during the upload process, the controller shall try to reestablish the communication connection every 10 minutes until a successful connection is made and all data is uploaded.

II. **Overall Specifications:** The telephone entry controller shall comply with the following specifications and offer selected options.

    A. **Controller Specifications -** Controller enclosure dimensions and specification shall be equal to or better than the following:

        1. Enclosure Styles:
           a. Surface Mount: 12"H x 9"W x 4"D (30.4cmH x 22.8cmW x 10.2cmD).
           b. Flush Mount, 16-gauge metal back box option.
           c. Hooded Mount, 16-gauge metal back box option.
           d. Lockable, rain and vandal resistant, 16-gauge steel enclosure.
           e. Finish: buffed Metallic Antique Bronze.
           f. Weather Resistant.

    B. **Controller Power and Environmental Specifications -** Controller shall meet the following power and environmental requirements:

        1. Voltage Input: 12VDC (optional standby power) +/- 10%
        2. Current Draw: Less than 1 amp.
        3. Power Consumption: Nominal 12 watts.
        4. Operating Temperature: 0º - 140º F (-18º - 60º C).

    C. **Input and Output Specifications -** Controller shall meet the following minimum Input and Output specifications:

        1. Outputs:
           a. Two nonprogrammable SPDT Dry Circuit Closures.
           b. Two auxiliary programmable SPDT Dry Circuit Closures.
           c. Closure contact Rating: 1 amp at 24 Volts.

        2. Inputs:
           a. Normally Closed (NC) Door Switch Input.
           b. Normally Open (NO) Request To Exit Input.
           c. Normally Open (NO) Auxiliary Input.

D. **Keypad Specifications –** Keypad design shall be a mechanical, vandal resistant, impact resistant and weatherproof water sealed 4 X 4 keypad designed for use in the most demanding public and outdoor environments. Operational life of the keypad shall be a minimum of four million cycles per key. Specification must meet the following minimum standards and features:

1. Weatherproof, water sealed to class IP-67 standard.
2. Ten numeric push-button keys.
3. Scroll key (2) for directional scrolling of the LCD display of the tenant enrollment list.
4. Audio volume control key.
5. A call keys for initiating calls to the tenant.
6. Clear (Clr) key to re-start a command.
7. An asterisk (*) function key
8. Solid-state illumination---no incandescent lighting.
9. Built-in ESD (voltage surge) protection.

E. **Operational Specifications -** The telephone entry controller shall have, as a minimum requirement, a visual message and directory display with a directory scrolling and an audio volume control.

1. LCD Display:
   a. Four line, 80 character, soft white Supertwist display.
   b. Three programmable 80 character, 20 character per line revolving message screen.
   c. Up and down scrolling keys with cursor indicator for pointing to tenant name.
   d. Tenant name displayed by scrolling or direct dial code input with option to block tenant name display.
   e. Fifteen-character name truncated to 13 characters with a six-digit dial code.

2. Audio Control:
   a. Adjustable, linear volume control
   b. Circular control volume key.
   c. Speaker vandal protection hole grid.
   d. Mylar speaker with superior sound quality.
   e. Programmable talk time.
   f. Adjustable microphone gain.

F. **Feature Set -** The telephone entry controller shall have as standard the minimum feature set:

1. PC programming.
2. Nonvolatile memory for storing 3,640 events on a first-in, first-out basis.
3. Capacity to manage 750 tenant dial codes.
4. Programmable dial codes from one to six digits.
5. Programmable telephone numbers up to 15-digit numbers.
6. PBX operation.
7. Built-in surge protection.
8. Code breaking protection.
9. Tone dialing.
10. Alarm shunt and alarm output.
11. Two Programmable Form C relay outputs

G. **Optional Features -** The telephone entry controller must offer the following optional features:

1. Postal Lock provision.
2. TDD option.
3. Braille keypad provision.
4. Local or Wide area network communication (LAN or WAN) with adapter.
5. Remote programming communication via modem.
6. Direct Line communication via an RS-232 protocol.
7. Flush or hooded mounting option.
8. Hands free or handset audio communication.

III.   Software Requirements:

A. Computer parameters:

1. PC does not have to be online for controller or network operation.
2. PC compatible computer using a Pentium™-90 or faster microprocessor.
3. A minimum of 16MB of RAM
4. SVGA color monitor with SVGA graphics of 800 x 600 minimum resolution.
5. CD-ROM, 3.5" floppy disk drive.
6. 50MB of free hard disk space.
7. Keyboard, Mouse or other pointing device.

B. Software Features:

1. Software operating system shall work with *Windows 95*, *Windows 98*, *Windows 2000*, *Windows ME*, *Windows XP*, and *Windows NT*.
2. Software will provide up to 32 password protected operators.
3. 32 time zones, each with four start/stop intervals with a "Do Not Disturb" function.
4. Three holiday schedules for each time zone, each with 32 definable holiday dates.
5. An unlimited number of access groups (levels); limited only by disk space.
6. Six user-definable text fields.
7. In addition to the management of a network consisting of 1 to 10 telephone entry controllers, integrate and manage from 246 to 255 access control points within the same network (depending on the number of telephone entry controllers used in the network).
8. Capability to manage up to 255 site locations, each site consisting of an access control network handling the maximum number of access points and users capacity as defined in this specification.
9. The software will manage up to 750 dial codes and be capable of managing up to 10,920 (expandable to 65,535) access control users.
10. Command entry point management from a remote location by modem or TCP/IP connection via an adapter.
11. Provide an event data collection and the creation of user activity reports.
12. Provide all programming functions including all user/operator definitions, time settings and report generation.

IV. **Warranty:**

A. The manufacturer shall ensure that the equipment is free from defects in design, material, manufacturing and operation.
B. The factory shall provide a warranty to repair or replace its equipment that fails as the result of normal usage.
C. Warranty period is two years from the purchase date.
D. User is responsible for freight costs to the factory.
E. For items under warranty, the manufacturer will bear the cost for freight to return the equipment to the user.
F.   The manufacturer is not responsible for damage due to shipping or user mishandling.