

# **Section 1 - Installation**

## **1.1 General Information**

The DoorKing Model 1816 telephone intercom system provides communication to, and control of, a door (or gate) for up to 1200 users without the need for a dedicated Central Office (C.O.) phone line. This eliminates monthly line charges and equipment lease payments to the telephone company. The system is used widely with housing authority projects and low income housing because the system will provide all building residents, whether they have central office phone service or not, with communication and control of the door or gate.

This manual describes the installation and wiring of the 1816 main and auxiliary control cabinets, and the RJ71 phone block(s) only. For installation instructions on the front lobby panel(s) that are to be used with the system, refer to the manual that is included with the lobby panel. The main and auxiliary cabinets should be mounted close to the RJ71 phone blocks required for interfacing the telephone lines with the system.

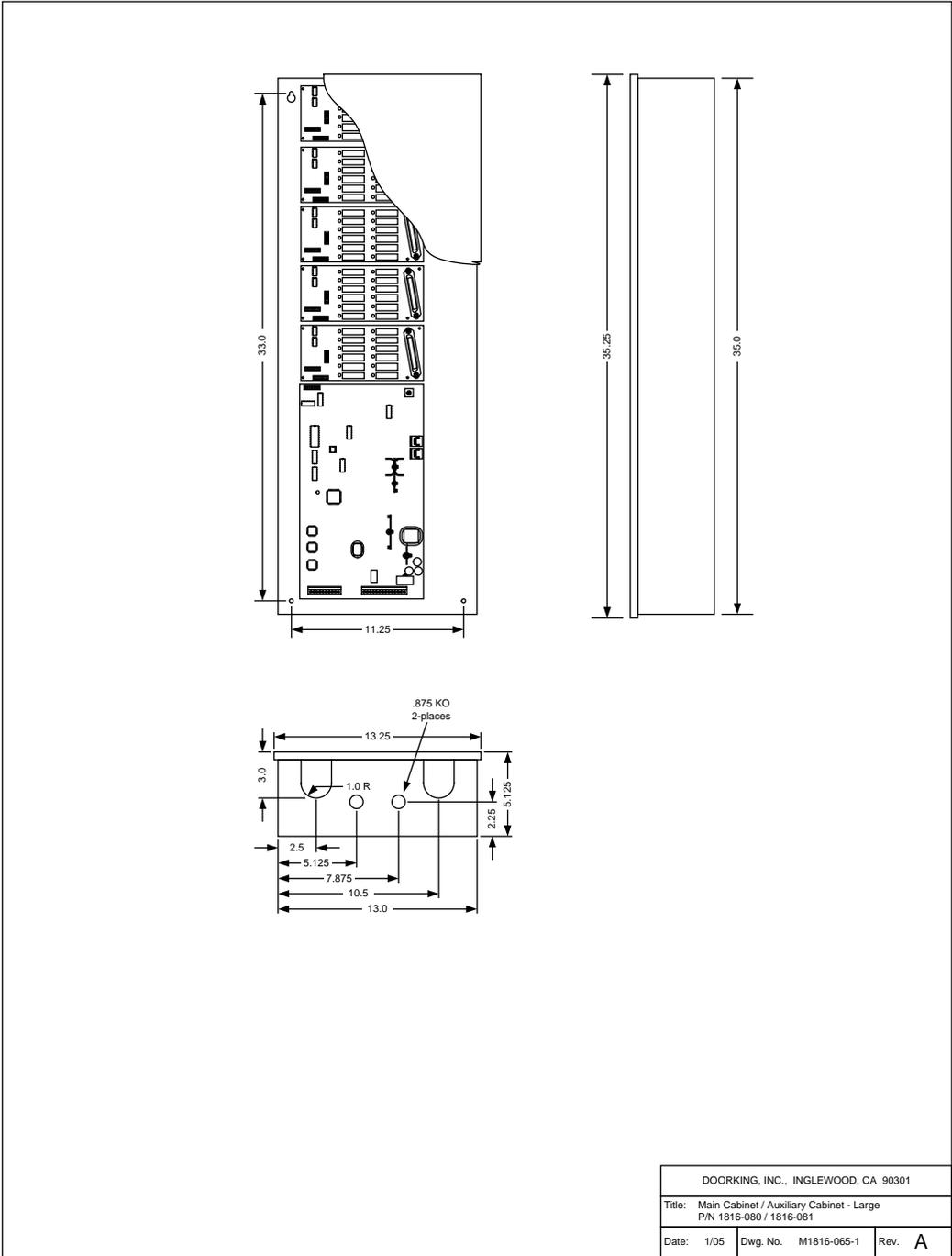
### **Central Office Phone Line.**

Although a C.O. phone line is not required for normal system operation, having a C.O. line installed to the 1816 main control cabinet will allow the use of the advanced features of the system. It should be noted that this C.O. line is not used for normal lobby panel to resident communication and an access code is required to utilize the C.O. line. Additionally, if a PC programmable telephone entry system (DKS models 1833, 1834, 1835, 1837) is used as the lobby panel, installing the C.O. line will enable programming of the system from an off site location. Order your telephone line at least two weeks prior to the planned installation date. This will assure that a phone line is available when the unit is installed. The telephone company will require the following information from you:

Type:	Touch Tone, Loop Start
Ringer Equivalence:	0.0 A
Jack Type:	RJ11C
FCC Registration (US):	DUF6VT-12874-OT-T
DOC (Canada):	1736 4528 A
Electrical Listing:	Complies with U.L. 294 - ETL Listed

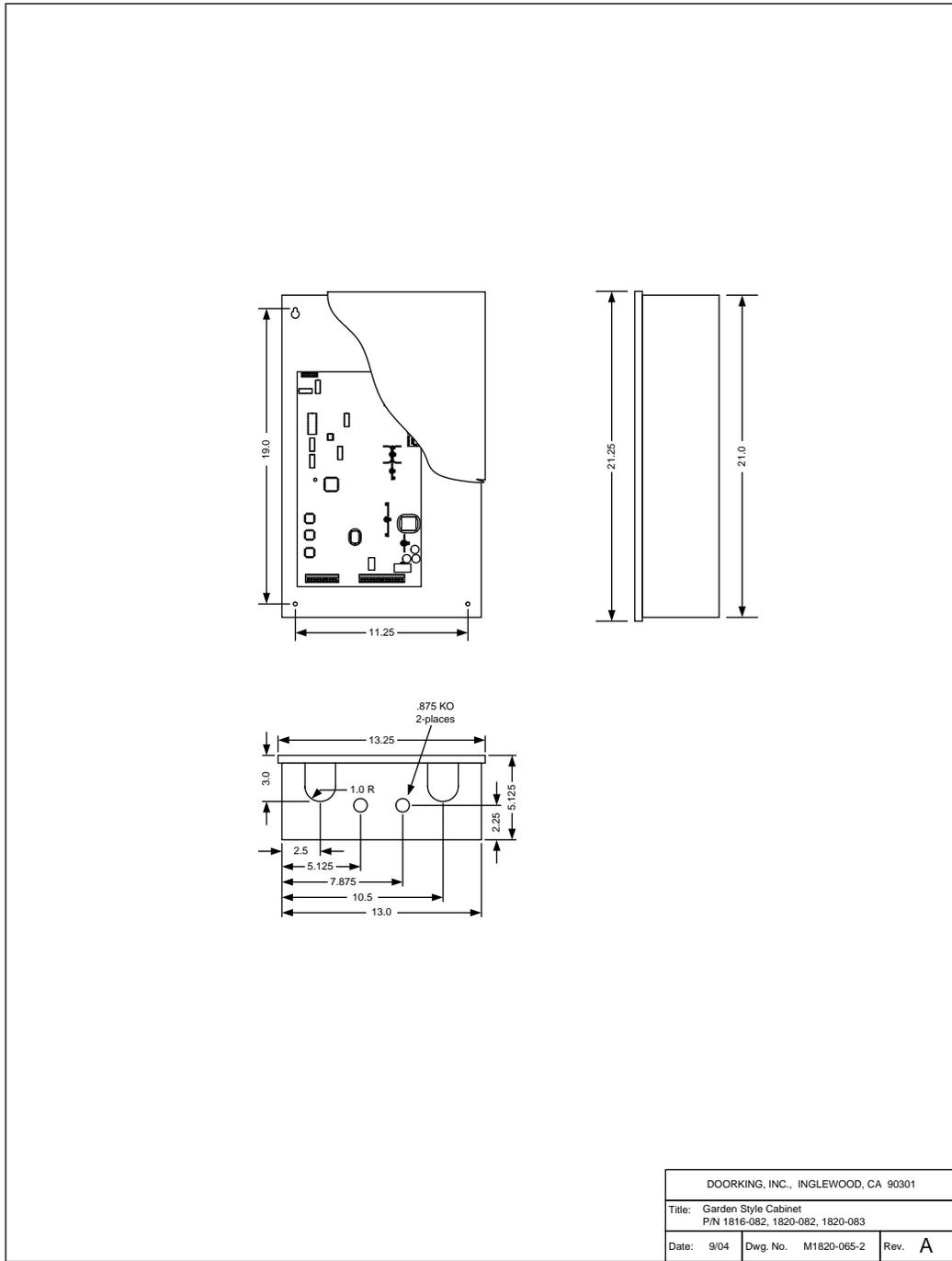
- Prior to starting the installation of this system, it is highly recommended that you become familiar with the illustrations, instructions and wiring diagrams in this manual.
- It is recommended that the local telephone company install and wire the RJ71 phone blocks required with this system.

1.1.1 Main and Auxiliary Cabinets



DOORKING, INC., INGLEWOOD, CA 90301		
Title: Main Cabinet / Auxiliary Cabinet - Large P/N 1816-080 / 1816-081		
Date: 1/05	Dwg. No. M1816-065-1	Rev. A

### 1.1.2 Garden Style Cabinet

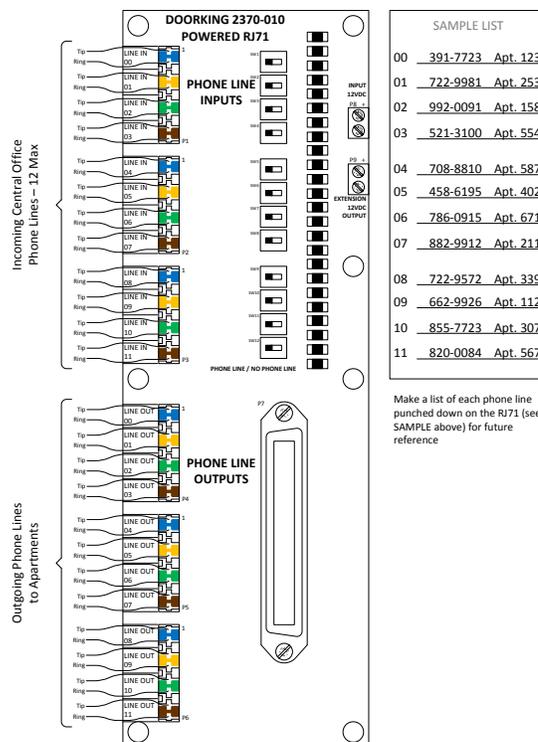


DOORKING, INC., INGLEWOOD, CA 90301		
Title: Garden Style Cabinet P/N 1816-082, 1820-082, 1820-083		
Date: 9/04	Dwg. No. M1820-065-2	Rev. A

## 1.2 RJ71 Phone Block Installation

The RJ71 wiring configuration is not recognized by all telephone companies. For Bell Canada, which has jurisdiction for Ontario and Quebec, refer to CA-79X jack for interconnect to the 1816 system. For BC Tel, which has jurisdiction in British Columbia, refer to BC Tel CRTC Spec 182 B5.

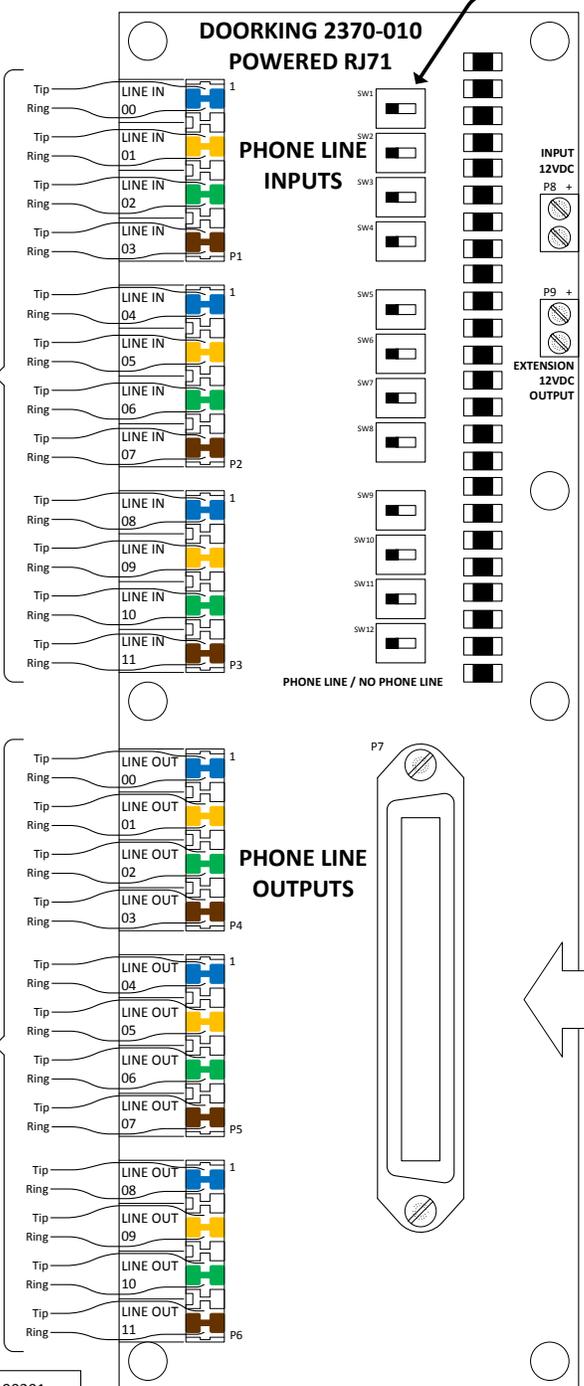
1. Order one (1) RJ71 block (P/N 2370-010) for every 12 telephone lines that the 1816 system will inter-connect with.
2. Have all required blocks installed in a common accessible location. This is usually near the original phone company termination board.
3. Be sure the RJ71 blocks are mounted within 15 feet of where the main and auxiliary cabinet(s) are to be installed. The standard length connecting cable supplied by DoorKing is 15 feet. If longer cables are required, special length cables will have to be ordered at an additional cost.
4. **IMPORTANT!!** Complete the RJ71 block identification form in the back of this manual. This form instructs the telephone company installer how the phone lines should be wired to the RJ71 blocks. Make copies of the form if more are required.
5. **IMPORTANT!!** Be sure that each RJ71 block is labeled! Each block should be numbered, and the phone number and apartment number should be documented (see example below).
6. Attach the RJ71 block identification form to the inside door of the 1816 cabinet after wiring is complete for future reference.



**IMPORTANT!**  
 TIP (Positive) RING (Negative polarity MUST be observed. TIP must be punched down on the top terminal of each pair and RING must be punched down on the bottom terminal of each pair.

Incoming Central Office  
 Phone Lines – 12 Max

Outgoing Phone Lines  
 to Apartments



**PHONE LINE/NO PHONE LINE** switch. Set to left (Phone Line) if resident has central office phone service. Set to right (No Phone Line) if resident does not have central office phone service.

**12 VDC Input Power** is used only with 1820 systems AND only if the apartment does not have central office phone service.

**12 VDC Output Power** is used if additional powered RJ71s (more than 12 phone lines) are required.

DoorKing, Inc. Inglewood, CA 90301		
Title: Detail Wiring - RJ71 Phone Block		
Date: 11/14	Dwg No. M1816-065-6	Rev E

### 1.3 Cabinet, Relay and Component Identification

For identification purposes, the Main Control Cabinet is defined as that part of the 1816 system that houses the main processor control board, and at least one, but not more than five, relay boards. Auxiliary Cabinets are defined as that part of the 1816 system that houses one decoder board, and at least one, but not more than eight, relay boards. Each cabinet is identified with a label and the system relays that it houses. There can only be one Main Control Cabinet per 1816 system, however, there can be several Auxiliary Cabinets per system. Auxiliary cabinets start with cabinet 0, and increase sequentially.

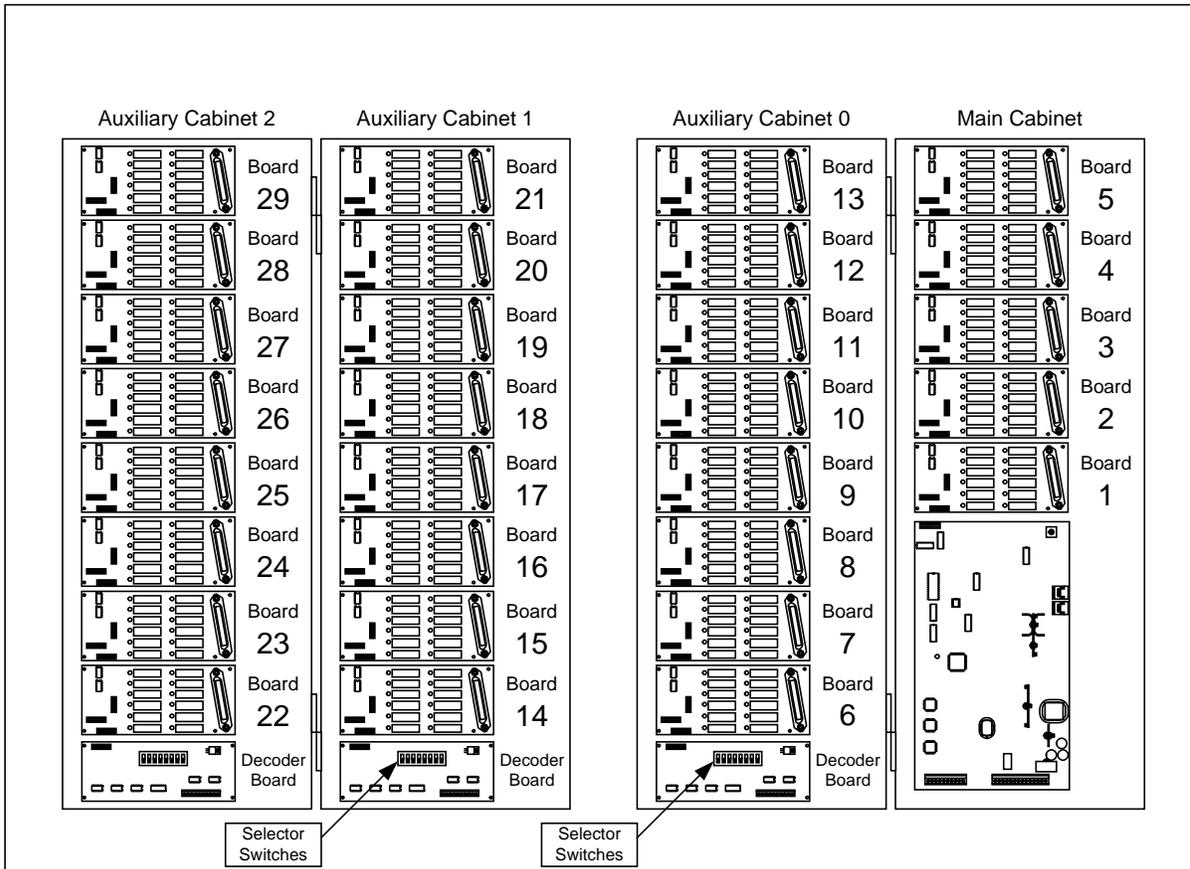
#### 1.3.1 Main Control Cabinet

If the 1816 system is interfacing with 60 or less phone lines, the Garden Style Cabinet will be used since no auxiliary cabinets will be required. If the 1816 system is interfacing with more than 60, but less than 156 phone lines, then the larger 1816 Main Control Cabinet will be used. The large main control cabinet houses the main processor board and 5 relay boards mounted in the cabinet. A decoder board and up to 8 relay boards can be mounted on the door of this cabinet, which is then identified (the door side) as Auxiliary Cabinet 0.

#### 1.3.2 Auxiliary Cabinets

Additional cabinets will be required if the 1816 system is interfacing with more than 156 phone lines. Each cabinet physically houses two Auxiliary Cabinets; 1 Auxiliary Cabinet (decoder board and up to 8 relay boards) is housed in the cabinet and a second Auxiliary Cabinet is housed on the door side. Since Auxiliary Cabinet 0 is housed in the Main Control Cabinet, these two Auxiliary Cabinets are labeled as Auxiliary Cabinet 1 and Auxiliary Cabinet 2. Auxiliary cabinets are numbered sequentially as additional cabinets are added.

Cabinet, Relay Board & System Relay Numbering Matrix						
Cabinet	Relay Boards	System Relay #'s				
Main	1 - 5	0000 - 0059				
Auxiliary Cabinets	Relay Boards	System Relay #'s	Auxiliary Cabinets	Relay Boards	System Relay #'s	
0	6 – 13	0060 - 0155	6	54 – 61	0636 - 0731	
1	14 – 21	0156 - 0251	7	62 – 69	0732 - 0827	
2	22 – 29	0252 - 0347	8	70 – 77	0828 - 0923	
3	30 – 37	0348 - 0443	9	78 – 85	0924 - 1019	
4	38 – 45	0444 - 0539	10	86 – 93	1020 - 1115	
5	46 – 53	0540 - 0635	11	94 - 99	1116 - 1199	



Cabinet Labels

Auxiliary Cabinet 2	
Relay	Board Jumper
0336-0347	8
0324-0335	7
0312-0323	6
0300-0311	5
0288-0299	4
0276-0287	3
0264-0275	2
0252-0263	1
Selector Switches 1 - 6, 8 ON, 7 OFF	

Auxiliary Cabinet 1	
Relay	Board Jumper
0240-0251	8
0228-0239	7
0216-0227	6
0204-0215	5
0192-0203	4
0180-0191	3
0168-0179	2
0156-0167	1
Selector Switches 1 - 7 ON, 8 OFF	

Auxiliary Cabinet 0	
Relay	Board Jumper
0144-0155	8
0132-0143	7
0120-0131	6
0108-0119	5
0096-0107	4
0084-0095	3
0072-0083	2
0060-0071	1
Selector Switches 1 - 8 ON	

Main Control Cabinet	
Relay	Board Jumper
0048-0059	5
0036-0047	4
0024-0035	3
0012-0023	2
0000-0011	1

DOORKING, INC., INGLEWOOD, CA 90301			
Title: Main Cabinet / Auxiliary Cabinet - Large Board Layout			
Date: 5/11	Dwg. No. M1816-065-3	Rev. B	