

MAXSYS®

PC4851 v1.0 • Installation Manual

WARNING: *This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.*

WARNING Please Read Carefully

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons

Limited Warranty

Digital Security Controls Ltd. warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls Ltd. shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original owner must promptly notify Digital Security Controls Ltd. in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that Digital Security Controls Ltd. shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of Digital Security Controls Ltd. such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by Digital Security Controls Ltd.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Digital Security Controls Ltd.'s liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls Ltd. be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) And of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Installer's Lockout

Any products returned to DSC which have the Installer's Lockout option enabled and exhibit no other problems will be subject to a service charge.

Out of Warranty Repairs

Digital Security Controls Ltd. will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which Digital Security Controls Ltd. determines to be repairable will be repaired and returned. A set fee which Digital Security Controls Ltd. has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which Digital Security Controls Ltd. determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit

Introduction

The PC4851 'No Phone Bill' module is used with the PC4850 Telephone Entry Controller to eliminate the need for a dedicated telephone line. The PC4851 interfaces between the tenant's telephone and the existing telephone system, allowing communication between the lobby intercom and the tenants. The PC4851 comprises a main controller board and one or more 12 or 24 line relay cards to provide up to 750 telephone connections.

Operation

When a visitor calls a tenant the following will occur:

- The PC4851 rings the tenant's telephone. If the phone is busy, the PC4851 module sends a double beep, indicating that a visitor is calling from the lobby.
- The tenant can switch to the visitor's call by pressing the **Hook-switch** or '**3**' on their telephone. This will disconnect the tenant's telephone from the telephone system but allow it to remain connected to the PC4851 module and the lobby intercom.
- The tenant can open doors by pressing **7** for door #1 or **9** for door #2.
- When the visitor's call is finished, the tenant can return to the original call by pressing **Hook-switch** or '**3**' on their telephone.

Specifications

- Supply Voltage 24 VAC
- Supply Current 40VA

Parts List

Fig 1 Item No.	Description	Part Number
5	No Bill Module	PC4851
9	Relay Module	TAR301A
	... Relay PCB (12 Lines)	TC312
	... Relay PCB (24 Lines)	TC324
3	Interconnect Module	TAB301A
1,13	Cabinet (2 Relay Mod Config.)	TCS6000S
Not Shown	Cabinet (10 Relay Mod Config.)	TCS6000L
2	Screws (4)	#8, 1 1/2" Wood Screw
14	Screws (2)	#6, 1/2" Self Tapping Screw
6	2-Wire Phone Connector Cable	RJ-31 to 2 flying leads
8	Ground Wire	18 AWG (min)
10/11	4-Wire Phone Connector Cable	RJ-31 to RJ-31 (4")
Not Shown	24 VAC Power Source	DSC PTD2440U or equivalent
12	Phone Panel Connector	RJ-71C Connector
	(Refer to Table 1 for wiring details)	

Telephone System Wiring

The PC4851 connects to the telephone system via one RJ-71C connector per 12 phone lines (two for each fully populated relay board). These cables must be wired by the telephone company prior to installation. Table 1 defines the cable wiring required by the phone company. Ensure that the phone company provides the Line Number and Apt. Number information required in Table 2. This will enable management to assign directory codes correctly.

Table 1 RJ-71C Cable Connections

Line No	Function	Outgoing Lines To Tenant Phones		Incoming Lines From Phone Co.	
		Color	Contact	Color	Contact
1	Tip Ring	Blue/White	1	White/Blue	26
		Orange/White	2	White/Orange	27
2	Tip Ring	Green/White	3	White/Green	28
		Brown/White	4	White/Brown	29
3	Tip Ring	Slate/White	5	White/Slate	30
		Blue/Red	6	Red/Blue	31
4	Tip Ring	Orange/Red	7	Red/Orange	32
		Green/Red	8	Red/Green	33
5	Tip Ring	Brown/Red	9	Red/Brown	34
		Slate/Red	10	Red/Slate	35
6	Tip Ring	Blue/Black	11	Black/Blue	36
		Orange/Black	12	Black/Orange	37
7	Tip Ring	Green/Black	13	Black/Green	38
		Brown/Black	14	Black/Brown	39
8	Tip Ring	Slate/Black	15	Black/Slate	40
		Blue/Yellow	16	Yellow/Blue	41
9	Tip Ring	Orange/Yellow	17	Yellow/Orange	42
		Green/Yellow	18	Yellow/Green	43
10	Tip Ring	Brown/Yellow	19	Yellow/Brown	44
		Slate/Yellow	20	Yellow/Slate	45
11	Tip Ring	Blue/Purple	21	Purple/Blue	46
		Orange/Purple	22	Purple/Orange	47
12	Tip Ring	Green/Purple	23	Purple/Green	48
		Brown/Purple	24	Purple/Brown	49
Not Connected		Slate/Purple	25	Purple/Slate	50

Installation (Refer to Figure 1 PC4851 Installation)

1. Locate the cabinet (1) in a dry area, close to the RJ-71C telephone block, with access to an unswitched AC power source. Mount the panel using appropriate wall anchors for the intended surface with 4 screws (2).
2. Install the plastic card guides (4) if required.
3. Insert the PC4851 module (5) through the card guides into the interconnect board (3). Ensure that the board locks in place.
4. Connect the two-wire connector cable (6) from NB1 and NB2 of the PC4850 controller into J1 of the PC4851 module.
5. Connect 24 VAC to terminals 1 and 2 (7) of the PC4851 module
WARNING: Do NOT apply power until all wiring is completed.
6. Connect the ground wire lead (8) to terminal 3 of the PC4851 module.
WARNING: Connect ground wire to chassis of AC outlet box.
7. Insert the relay modules (9) as described in Step 3.
8. Connect the short 4-conductor cable (10) from J2 on the PC4851 module to J1 on the adjacent relay board.
NOTE: If more than one relay module is used, connect J2 (11) of the first relay module to J1 of the second relay module. Connect additional relay modules in the same manner.
9. Verify that the all wiring is correct and that connections are secure before connecting RJ-71C interface cables to CON 1 and CON 2 on the relay modules.
10. Position cover (13) at bottom of cabinet. Slide cover upwards until flush with cabinet, secure with the two screws (14) provided.

Programming

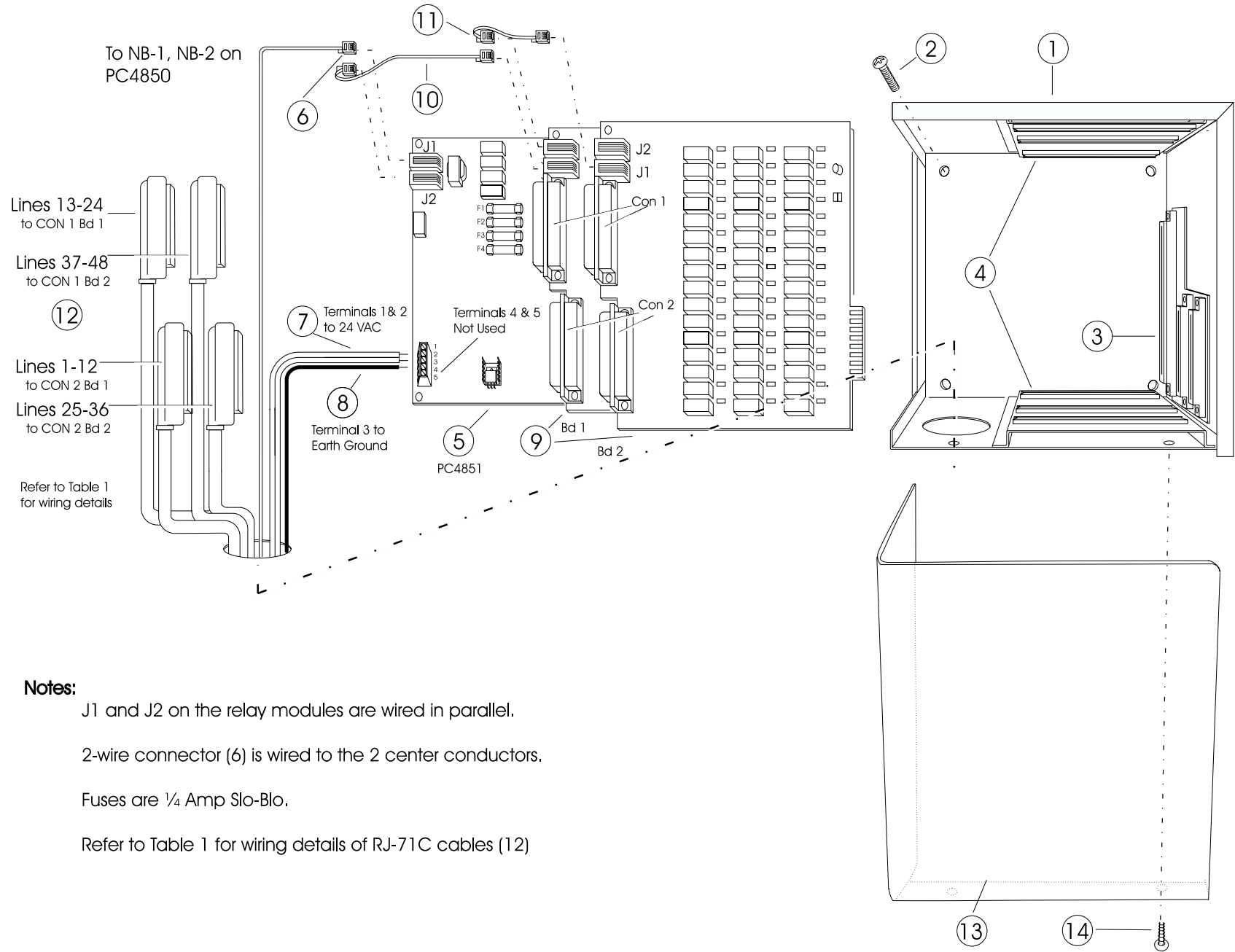
Enter the following at the MAXSYS system keypad; Refer to PC4020 *Installation Manual*.

1. Enter [*][8][Installer's Code].
2. Enter reference number [0017XX00] where XX is the number of the PC4850 module
3. Use the arrow (<>) keys to scroll until **NO BILL** is displayed
4. Press [*] to toggle the option ON.
5. Press [#] 4 times to finish.

Testing

- Verify correct operation by manually entering each directory code and verifying the apartment number.
- Record all information in the Block Identification Form (Table 2) for reference.

Figure 1 PC4851 Installation



Notes:

- J1 and J2 on the relay modules are wired in parallel.
- 2-wire connector (6) is wired to the 2 center conductors.
- Fuses are ¼ Amp Slo-Blo.
- Refer to Table 1 for wiring details of RJ-71C cables (12)

RJ-71C Block Number					
Relay	RJ-71C Pins		Line	Apt.	Directory
Line No.	Input	Output	Number	Number	Code
1	1,2	27,28			
2	3,4	29,30			
3	5,6	31,32			
4	7,8	33,34			
5	9,10	35,36			
6	11,12	37,38			
7	13,14	39,40			
8	15,16	41,42			
9	17,18	43,44			
10	19,20	45,46			
11	21,22	47,48			
12	23,24	49,50			

RJ-71C Block Number					
Relay	RJ-71C Pins		Line	Apt.	Directory
Line No.	Input	Output	Number	Number	Code
1	1,2	27,28			
2	3,4	29,30			
3	5,6	31,32			
4	7,8	33,34			
5	9,10	35,36			
6	11,12	37,38			
7	13,14	39,40			
8	15,16	41,42			
9	17,18	43,44			
10	19,20	45,46			
11	21,22	47,48			
12	23,24	49,50			

Table 2 RJ-71C Block Identification Form

RJ-71C Block Number					
Relay	RJ-71C Pins		Line	Apt.	Directory
Line No.	Input	Output	Number	Number	Code
1	1,2	27,28			
2	3,4	29,30			
3	5,6	31,32			
4	7,8	33,34			
5	9,10	35,36			
6	11,12	37,38			
7	13,14	39,40			
8	15,16	41,42			
9	17,18	43,44			
10	19,20	45,46			
11	21,22	47,48			
12	23,24	49,50			

RJ-71C Block Number					
Relay	RJ-71C Pins		Line	Apt.	Directory
Line No.	Input	Output	Number	Number	Code
1	1,2	27,28			
2	3,4	29,30			
3	5,6	31,32			
4	7,8	33,34			
5	9,10	35,36			
6	11,12	37,38			
7	13,14	39,40			
8	15,16	41,42			
9	17,18	43,44			
10	19,20	45,46			
11	21,22	47,48			
12	23,24	49,50			

INDUSTRY CANADA STATEMENT

AVIS: L'étiquette de l'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Industrie Canada n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, les lignes téléphoniques et les canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

Indice d'équivalence de la sonnerie (IÉS) assigné à chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices d'équivalence de la sonnerie de l'ensemble des dispositifs ne dépasse pas 5.

Indice d'équivalence de la sonnerie de ce produit est 0.0.

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

User should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Ringer Equivalence Number (REN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Ringer Equivalence Number of all the devices does not exceed 5.

The Ringer Equivalence number of this unit is 0.0.

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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:

- Re-orient 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/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

Important Information

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

NOTIFICATION TO TELEPHONE COMPANY. The customer shall notify the telephone company of the particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC Registration Number: F53CAN-36295-AL-N

Ringer Equivalence Number: 0.0

USOC Jack: RJ-71C

TELEPHONE CONNECTION REQUIREMENTS. Except for the telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of the terminal equipment. Standard jacks shall be so arranged that, if the plug connected thereto is withdrawn, no interference to the operation of the equipment at the customer's premises which remains connected to the telephone network shall occur by reason of such withdrawal.

INCIDENCE OF HARM. Should terminal equipment or protective circuitry cause harm to the telephone network, the telephone company shall, where practicable, notify the customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if such action is deemed reasonable in the circumstances. In the case of such temporary discontinuance, the telephone company shall promptly notify the customer and will be given the opportunity to correct the situation.

ADDITIONAL TELEPHONE COMPANY INFORMATION. The security control panel must be properly connected to the telephone line with a USOC RJ-71C telephone jack.

The FCC prohibits customer-provided terminal equipment from being connected to party lines or being used in conjunction with coin telephone service. Interconnect rules may vary from state to state.

CHANGES IN TELEPHONE COMPANY EQUIPMENT OR FACILITIES. The telephone company may make changes in its communications facilities, equipment, operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render the customer's terminal equipment incompatible with the telephone company facilities the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

RINGER EQUIVALENCE NUMBER (REN). The REN is useful for determining the number of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

EQUIPMENT MAINTENANCE FACILITY. If you experience trouble with this telephone equipment, please contact your equipment supplier for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.



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