

BIOSYSTEM[®]

BC-2000 Access Controller

User manual

Introduction

The BC-2000 access control keypad and card reader uses the latest microprocessor technology to operate control the opening and closing functions of automatic gates, electric strikes, and most security systems that require a momentary (timed) or latching dry contact.

All programming is done through the keypad. Codes and operating parameters are stored within the microprocessor and cannot be lost due to power failure.

The BC-2000 can store 1000 proximity cards and 1000 users with 4 digit password codes. Each 4 digit password code has 10,000 possible combinations.

Specifications

1: Programmable Functions

- Relay latching or momentary
- Relay strike time
- Change Codes 1 master, 1000 users & 1000 proximity cards
- Door open detection

2: Programmable Timers

- Door relay time 00-99 seconds
- Door open detection 00-99 seconds
- Alarm time 00-99 minutes

3: Wiring Connections

- Electric lock
- External bell
- External Push Switch
- Magnetic Contacts
- Alarm

4: Metal shell

- Keypad
- 12 keys with backlight

5: Programming memory:

- Non volatile EPROM memory

IMPORTANT INFORMATION

If holes are to be drilled before mounting onto a wall, check for hidden cables and/or pipes before drilling. Use safety goggles when drilling or hammering in cable clips. Every effort has been made to provide accurate information, however slight variations can occur. We also reserve the right to make changes for product improvement at anytime

NOTE: please read these instructions carefully before attempting to install the BC-2000

Internal Interface Circuit

1. Alarm output interface (See Figure 1)

2. Electric lock interface (See Figure 2)

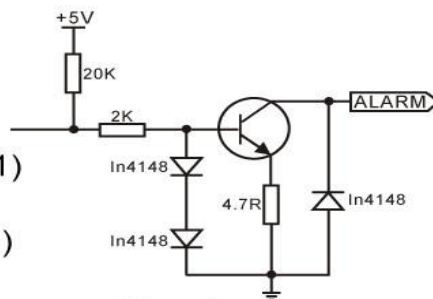


Figure 1

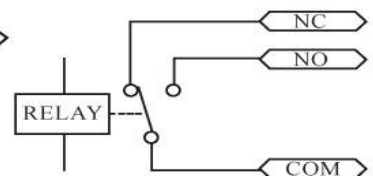
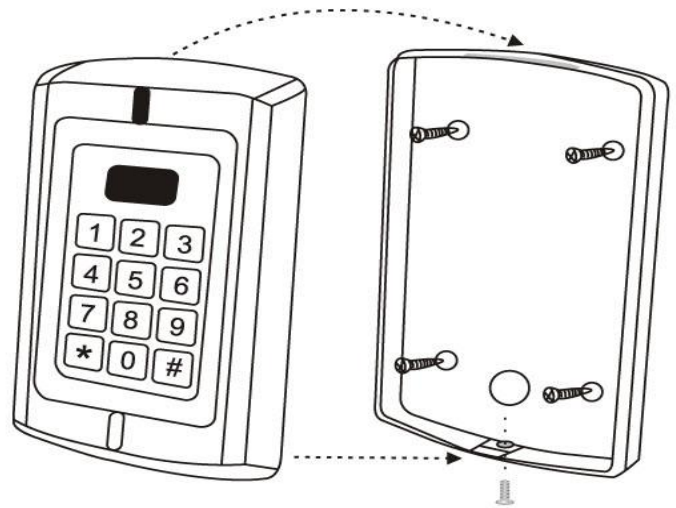
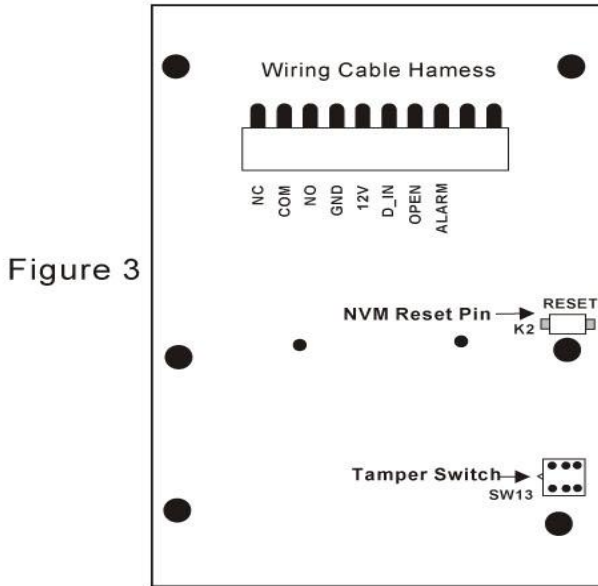


Figure 2

Mounting

1. Attach the rear plate to a single or double gang electrical box or secure to the wall firmly with at least three flathead screws.
2. When wiring has been completed, attach the front cover to the rear plate.



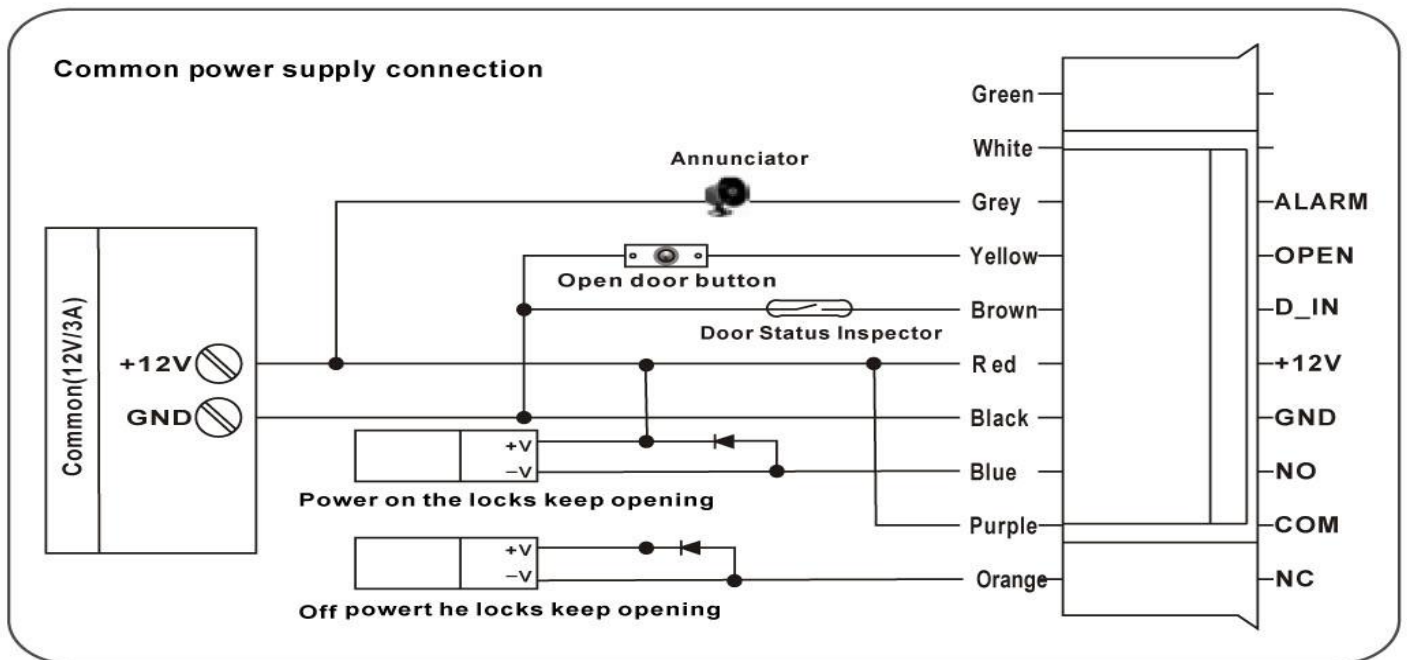
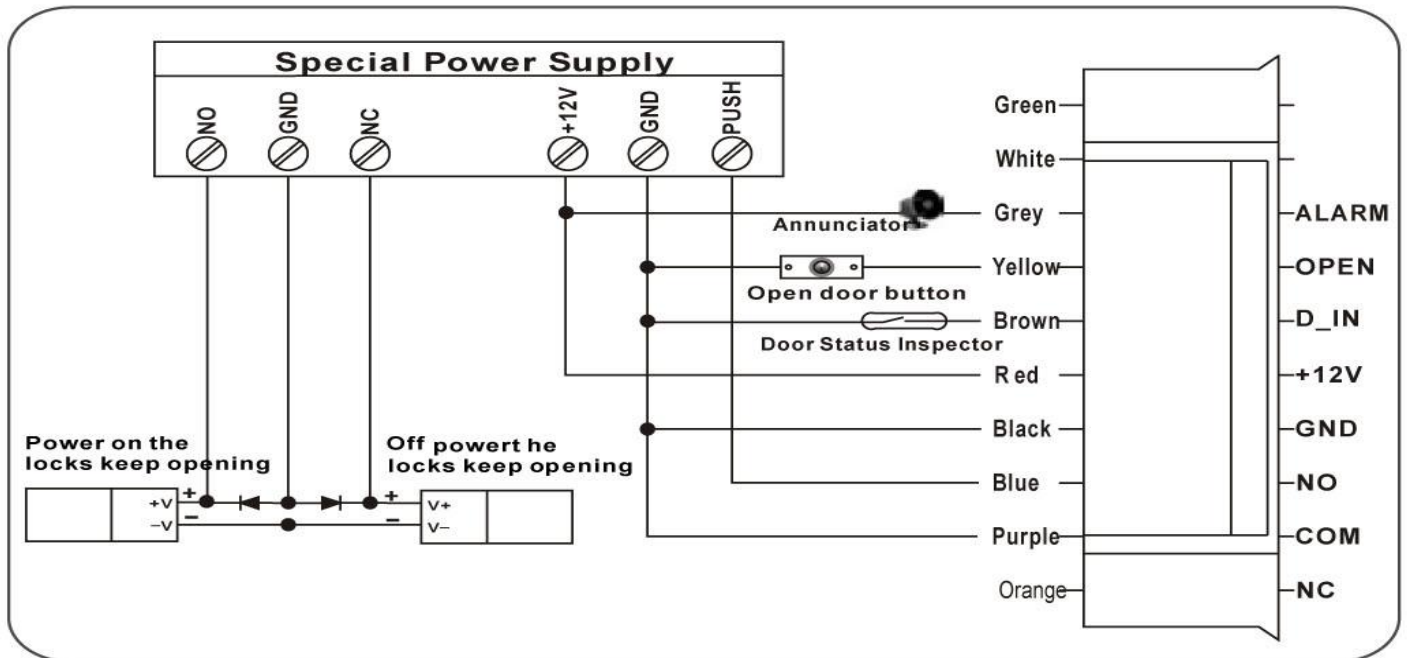
Wiring

1. Unplug the cable harness and connect the necessary cables, (See Figure 3).
2. Tape any wires that are unused.
3. Plug in the cable harness on the PCB, (See Figure 3)
4. attach the front cover (See Figure 4)

Terminal Wire Connector 1 Function

10		Green	
9		White	
8	ALARM	Grey	Alarm Switched negative when active
7	OPEN	Yellow	To Door EXIT Request Button Then Negative
6	D_IN	Brown	To Door Contact Then To Negative
5	12V	Red	(+) 12VDC Positive Regulated Power Input
4	GND	Black	(-) Negative Regulated Power Input
3	NO	Blue	Door Strike Relay N/O
2	COM	Purple	Door Strike Relay Com
1	NC	Orange	Door Strike Relay N/C

Do not plug the power supply or transformer into the mains until all wiring has been completed and the front cover secured.



Power Up

1. After all wiring is complete and the unit face plate is attached to the back plate, apply power to the unit. The red LED will be flashing.

Engineer Programming Mode

1. To enter programming mode

Press: [*] [9999] [#] quickly and within 5 seconds, The red and green LED will flash rapidly then slowly. If no key is pressed in 30 seconds the unit will exit programming mode. (**Note:** * button is the same as door 'bell' symbol button)

Note:

Press: [*] to save changes and exit from the engineer programming, when all programming has been completed, otherwise changes will not be saved.

2. Master code: (Default code 9999)

To change Master code: In programming mode

Press: [0] [new master code] [#] [re-enter new code] [#] [*] Upon acceptance the red & green (yellow) LED lights and stops flashing. After pressing the [*] button the keypad will exit programming mode and the red LED will flash. Note: the master code must be 4-8 digit number.

(Note:

1. All the steps below (from 3-7) are done in the Programming mode, that is [*] [Master code] [#].
2. In each step when you finished the operation, if you want to save and exit from the programming mode, just press [*]; if you want to continue the programming, just go ahead to the next step directly until you finished, last press [*] to save and exit.)

3. User Operation Mode for access

There are 3 different options: Card only, card and password, Card or Password

The option used is common to all users. (**Note:** you can only choose one of them)

1. Valid card only, Press: [3] [00] [#]
2. Valid card and password, Press: [3] [01] [#]
3. Valid card or password, Press: [3] [02] [#]

3.1 Valid Card Mode (300#)

(In this mode, the user can only open the door by the card)

3.1.1 To Add User card Press:

[1] [read card] [user identification number (000 to 999)] [#]

(Press * if you want to save and exit)

Note: the user identification must be a unique 3 digit number, this is not their access password, it is just a user ID. And the ID number must be different on each card.

To add more than 1 card at a time:

Enter the programming mode then press:

[1] [read card 1] [user ID number] [read card 2] [user ID number] [read card n] [user ID number (000 to 999)] [#]

3.1.2 Use the card to release the door

Simply swipe the card on the reader window, and the door will open.

3.1.3 To delete the card

There are 3 options to delete a user card or cards, in engineering mode.

a.) Press: to delete all user cards

b.) Press: to delete individual user card

c.) Press: to delete individual user card

3.2, Valid card and password Mode (301#)

(In this mode, the user can only open the door by the card and password together)

3.2.1 To Add User

First add the card:

Press:

Second, add the password

Press:

(Password must be 4 digit code between 0000 & 9999 with the exception of 1234 which is reserved)

To add a password for multi users, please repeat the former step (3.2.1) as adding one.

3.2.2 To release the door

+ + , and the door will open.

3.2.3 To delete a user

Carry out the same procedure as 3.1.3

3.3 Valid card or password Mode (302 #)

(In this mode, the user can only open the door by either the card or the password)

3.3.1 To Add User

First add the card:

Press:

Second, add the password:

Press:

To add a password for multi users, please repeat the former step (3.3.1) as adding one.

3.3.2 To release the door

, the door will open. # , the door will open.

3.3.3 To delete the user

Carry out the same procedure as 3.1.3

Setting Door Output Relay Strike Time

(Default setting: 6 seconds)

The door relay operating duration time can be set from 0 seconds to a maximum of 99

seconds. The factory default setting is 6 seconds and can be changed by programming the desired relay operation time. Press: **4** **new time from 00-99 seconds** **#**

Setting Alarm Signal Output Time

Press: **5** **new time from 00-99 minutes** **#**

Setting Door Open Detection

Press: **6** **00** **#** to disable this function (factory setting)

Press: **6** **01** **#** to enable this function.

In order for this feature to work, door contacts must be connected. There are 2 programming functions that work together in this mode.

a.) If door is not closed after opening, the keypad buzzer sounds.

b.) If the door is forced open, keypad buzzer sounds and activates the alarm signal output.

Setting Security Arrangement

There are two levels of keypad security available for the BC-2000.

Press: **7** **01** **#** to read 10 invalid cards or enter 4 wrong passwords in succession, the keypad is locked for 10 minutes.

Press: **7** **02** **#** to read 10 invalid cards or enter 4 wrong passwords in succession, the keypad activates buzzer and alarm signal output.

To disable this feature:

Press: **7** **00** **#** factory default setting.

Resetting To Factory Default Setting

To reset the flash memory (see figure 3), turn off the power, press the RESET key (BC-2000) on the PCB, hold it and re-power the device, keep holding it for around 5 seconds until hear beeps, means reset to factory default setting successfully.

Note: Reset to factory default, the user's information enrolled will lose, so use with care.

Technical Specification

Supply Voltage:	12V DC
Current Consumption:	100mA @ quiescent maximum
Door Relay:	3Amp
Alarm output load:	150mA pull current
Memory:	Non volatile EPROM memory
Codes:	1 Master, 1000 cards and 1000 codes
Keypad:	12 keys, 3 LED status indicators
Card Types:	EM or EM compatible
Induction Distance:	3-7cm
Wiring Connections:	Electric lock
	Remote Request to Exit
	Door open detection
	External Alarm
Tamper Protection:	Negative loop, normally closed
Keypad Housing:	Metal
Operating Temperature:	-15°C to 60°C (5°F to 140°F)
Dimensions:	128 mm×82 mm×28mm
Weight:	500g

Package Listing

Name	Model no.	Qty	Remark
Digital Keypad	BC-2000	1	
User Manual	BC-2000	1	
Flat Head Screws	Φ3mm × 6mm	1	Used for front case and back case
Wall Fixing Plug	Φ6mm × 27 mm	4	Used for fixing
Self Tapping Screws	Φ4mm × 27 mm	4	Used for fixing