

CYPHER[®] LOCK INSTALLATION INSTRUCTIONS

**FOR: MODEL S with OPTION B2 (Battery Standby)
MODEL S with OPTION B2 (Battery Standby) and OPTION A6 (Annunciator System)
For special applications please contact factory.**

These instructions are divided into three parts, the first covering the preparation of the door so that it can be most easily controlled by the CYPHER[®] LOCK. The second section describes the physical installation and the third part describes the control box wiring.

NOTE: IN ORDER TO SAVE YOU TIME AND SIMPLIFY THE INSTALLATION OF YOUR CYPHER LOCK, IT IS ADVISABLE TO CONNECT THE PUSHBUTTON PANEL AND THE ELECTRIC STRIKE TO THE CONTROL BOX BEFORE INSTALLING THESE COMPONENTS IN YOUR FACILITY. THIS WILL PROVIDE A SIMPLE PRELIMINARY WORKING SYSTEM WHICH REQUIRES JUST A FEW MINUTES OF YOUR TIME PRIOR TO INSTALLATION.

1. DOOR PREPARATION

1.1 Lock Set

The means of locking the door must permit the door to be locked from the outside while allowing exit from the inside in case of fire. A lockset for typical electric strike application should be used. The lockset must be the type with a fixed or rigid outside knob. The inside knob should turn freely to allow egress through the door. The type of lock with a turn or pushbutton to lock or unlock the outside knob is not usually recommended. A key cylinder on the outside may be included, if desired. This type of lock is made by many manufacturers in several different quality levels. Consult your locksmith or architectural hardware consultant for assistance in selecting the proper lockset.

1.2 The Electric Door Strike

Any low voltage DC door opener or latch release may be used. It is not necessary to use a transformer, since the CYPHER LOCK supplies the output voltage. The Option B2 emergency battery standby DC output voltage has been pre-set at the factory for 6VDC, 12VDC or 24VDC. The output voltage and maximum current draw is shown below:

6 Volt DC	2 AMPS	NOTE: In the <u>DC</u> position the output circuit will deliver an initial booster surge of current to energize the Electric Door Strike.
12 Volt DC	1 AMP	
24 Volt DC	0.5 AMPS	

Optional outputs are available to operate other voltages. The electric strike should be mortised into the door frame to replace the standard strike. For double doors, the electric strike is mortised into the inactive leaf and a flexible connection or electric hinge is used to transfer power from the frame to the door. A surface-mounted type of electric door strike is also available if recessing is impractical or simple installation is desired.

Electric strikes are manufactured in a wide range of styles to work with most locksets and a wide range of quality levels. A data sheet detailing several types of strikes is included with these instructions. Electric strikes are in stock and available from Continental Instruments Corporation for immediate delivery.

1.3 Other Types of Installation

While most common installations consist of a lock and electric strike, other applications are available. CYPHER LOCK can be used on doors equipped with many types of locking devices such as panic exit devices or electric solenoid deadbolts. CYPHER LOCK can also be used to control overhead door operators, gate operators, machinery, activate alarm systems and many others. Contact the factory or your local representative for assistance.

2. CYPHER LOCK INSTALLATION

Installation of the unit simply requires mounting the pushbutton panel to the exterior wall with the use of threaded rods, which are supplied (see drawing). Then run the wires (supplied) to the various parts, as per drawing. CYPHER's voltage output will operate almost all electric door strikes (6, 12 or 24 Volt AC or DC). Other input and output voltages are available upon request. The input cord plugs into a standard "U" ground outlet for 115 Volt AC, unless ordered with 220 Volt input.

2.1 Locations

The pushbutton panel may be mounted on the exterior wall (outside the secured area) either to the right or left of the door about 4 feet above the floor. The control box may be mounted or placed anywhere in the secured area. If an electric strike is used, the control box may be mounted to the right or left of the door, but wiring will be simplified if both the pushbutton panel and the control box are on the same side of the door frame as the electric strike.

2.2 Mounting the Pushbutton Panel

Hold the pushbutton panel template against the wall where it will be mounted and mark the location of the cable hole (3/4" dia.) and the threaded attached rods (1/4" dia.). Drill a 3/4" hole for the cable and 1/4" holes for the threaded attaching rods. Thread the rods into the pushbutton panel (not more than 6 turns!). Push the threaded rods and multi-conductor cable through the appropriate holes in the wall so that the pushbutton panel sits flush to the wall. On the other side of the wall (protected area), slide the washers onto the threaded rods and screw on the hex nuts. Any excess rod may now be cut off. If desired, an excess of 1/8" thread may be left beyond the hex nuts in order to allow the acorn nut enough thread to be screwed on. The assembly of the acorn nut supplied will enhance the appearance of the installation. NOTE: Be sure to cover all rocker switches during installation. Resin, dry wall, or any fine powdery substance may cause these switches to become inoperative, thus voiding the warranty on this panel.

Now run the cable to where the control box is to be mounted (preferably snaked inside the wall or through conduit). Conduit must be a minimum of 7/8" inside diameter.

2.3 Mounting the Control Box

Hold the control box template against the wall and mark the location of the four mounting holes. Drill holes and mount the control box with four screws. Molly bolts (maximum #10 screw size) may be required for some types of wall construction.

2.4 Wiring Instructions

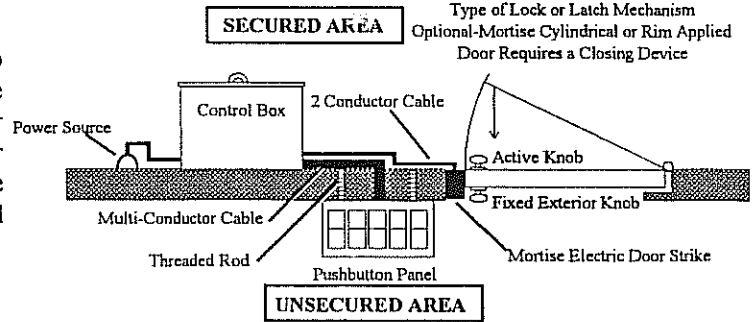
Wiring the terminal strip after opening the hinged door of the control box: Shown in the following drawings are all the possible CYPHER LOCK Model S options and wiring combinations. Select the drawing that matches the option(s), if any, that you have ordered.

2.4.1 Wiring the Terminal Strip

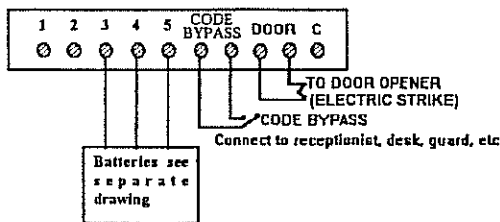
Terminals #1 and #2 are for activating the Option A6 Annunciator System. If this option was ordered at time of manufacture, shorting these two terminals together will cause the annunciator to sound. Two black wires from the pushbutton panel harness are connected to these terminals. See Paragraph 4.2 for details.

Terminals #3, #4, and #5 have been connected to the gel type batteries. A trickle charge automatically recharges these gel type batteries during normal primary AC operation. When AC power fails, Model S B2 converts to battery power until AC power is restored. Unless otherwise specified at time of order, this unit has been wired for 24 Volt DC output (in both the AC and emergency battery standby mode). Do not attempt to change the battery wiring. Make sure the electric door strike is designed to operate at the same voltage as the output from the CYPHER LOCK Model S with Option B2.

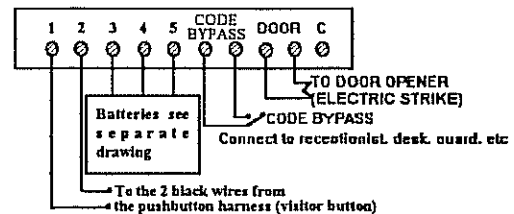
(TOP VIEW OF SECTIONED WALL AND DOOR)



MODEL S WITH OPTION B2 (BATTERY STANDBY)

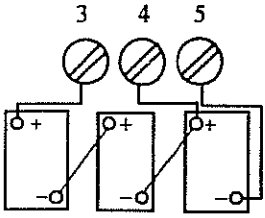


MODEL S WITH OPTION B2 (BATTERY STANDBY) AND OPTION A6 (VISITOR BUTTON)

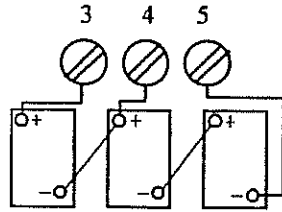


BATTERIES

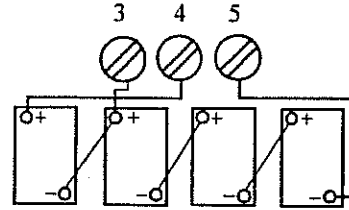
NOTE: Each battery shown is a 6VDC rechargeable gel type with a rating of 1.2 Amp Hours.



**DETAILED WIRING INSTRUCTIONS
FOR 6VDC EMERGENCY BATTERY
STANDBY - OPTION B2**



**DETAILED WIRING INSTRUCTIONS
FOR 12VDC EMERGENCY BATTERY
STANDBY - OPTION B2**



**DETAILED WIRING INSTRUCTIONS
FOR 24VDC EMERGENCY BATTERY
STANDBY - OPTION B2**

CAUTION: The emergency battery standby voltage is preset at the factory and cannot be changed. Do not attempt to re-wire or change the battery wiring.

PRETEST: Black (and red) wire from battery pack may be momentarily connected for pretest. Permanent connection should be made upon connection of unit to AC power to prevent undue drain or possible damage to batteries. Connect black wire to Terminal #5 (and red wire to Terminal #4).

4. MULTI-CONDUCTOR CABLE (PUSHBUTTON PANEL HARNESS)

Slide the black rubber grommet on the multi-conductor cable into the slot in the lower righthand corner of the control box so that the plugs are facing into the control box. Connect the white wire with the forked lead to the terminal marked "C." This is the common lead.

4.1 Option A6

If option A6 (Annunciator System) has been ordered, find and connect the two black wires with the forked leads to Terminals #1 and #2.

4.2 Code Bypass

Enables personnel inside the secured area to release the electric door strike without entering the pushbutton code. Wire terminals marked "Code Bypass" to a normally open switch (door bell type).

4.3 Code setting and changing

Four of the ten numbered plugs are selected to make up the access combination and are plugged into the upper row of sockets marked 1st, 2nd, 3rd and 4th. (Example: Plug #5 in the first socket, #4 in the second socket, #2 in the third socket and #1 in the fourth socket. The sequential combination is now 5-4-2-1.) The remaining six plugs are then plugged into the lower row of sockets. By reading the plug numbers from left to right in the top row, one can see what combination has been set.

5. WIRING THE ELECTRIC DOOR STRIKE

Connect 18 gauge (or heavier) two conductor wire from the electric door strike to the two terminals marked "Door" on the terminal strip in the control box. The CYPHER LOCK system is now completely connected and ready to be used. The CYPHER LOCK Model S-B2 output voltage was set for either 6, 12 or 24 Volts DC. **MAKE SURE THAT THE VOLTAGE OUTPUT OF THE CYPHER LOCK Model S-B2 IS COMPATIBLE WITH THE ELECTRIC DOOR STRIKE YOU ARE USING.**

6. ADJUSTING TIMING CONTROLS

6.1 Time Penalty

This knob control adjusts the length of time the control box will shut down whenever an incorrect number is entered into the pushbutton panel. The time penalty is adjustable from between 0 (turn counterclockwise) and 60 seconds (turn clockwise). This direction is marked in the control box with "S" (Shorter) and "L" (Longer).

6.2 Variable Door Open Time

The output voltage (from the two terminals marked "Door") is adjustable from 0 (turn counterclockwise) to 14 seconds (turn clockwise). For maximum security, this time should be set as short as possible.

7. TROUBLE SHOOTING

7.1 Trouble shooting the pushbutton panel

Clip one lead of an ohmmeter or continuity checking instrument to the common lead and the other lead to plug #1. Depress the #1 rocker switch on the pushbutton panel. There should be continuity between the common and plug #1. Repeat the procedure with the remaining 9 plugs. There should be continuity measured between common and all plugs from 0 to 9. Now, repeat the entire procedure, but do not depress the rocker switches. There should be no continuity between common and any of the plugs. If these procedures check out, the pushbutton panel is operating properly.

7.2 Trouble shooting the control box

7.2.1 Input voltage

Are you sure there is 120 volt, 50/60 Hz input voltage at the wall receptacle? Frequently, in new construction, the circuit breakers have not been turned on.

7.2.2 Code Sockets

Strip both ends of a 12" wire. Connect one end of the wire on the terminal marked "C" and momentarily insert the other end in each of the top four sockets marked "1st," "2nd," "3rd," and "4th." If output voltage does not appear, the controller needs to be sent to the factory for repair.

7.2.3 Code Bypass

Short the terminals marked "Code Bypass" together with a screwdriver. The electric door strike should open. If the electric door strike does not open, use a meter on "Door" Terminals to determine if output voltage is present and compatible with electric strike when terminals are shorted. If output voltage is present, check the electric strike for proper operation.

NOTE: Voltage read with a voltmeter with no load will be higher than the nominal 6V, 12V or 24V.

7.2.4 Variable door open time

Make sure this control is turned clockwise.

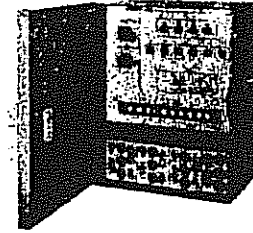
8. GUARANTEE

CYPHERLOCK is guaranteed for one year from date of shipment. Removing the rivets and opening the control box or pushbutton panel voids this guarantee. If you are experiencing any problems with the equipment, call the distributor or the factory. Do not attempt to open or repair either the control box or pushbutton panel.

DRILLING TEMPLATE

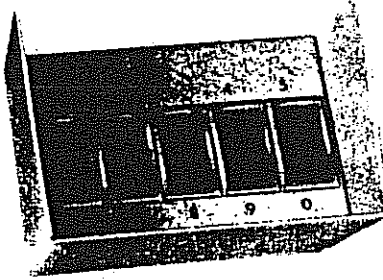
(SCALE, FULL)

9" HIGH STANDARD LOGIC CONTROL BOX



$5\frac{1}{8}$

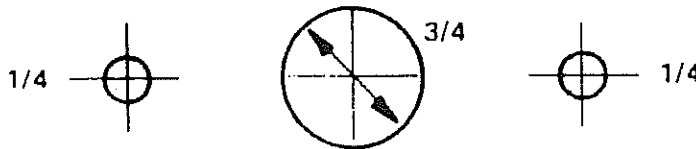
STANDARD PUSH BUTTON PANEL



$3\frac{1}{2}$

$10\frac{1}{16}$

CLEARANCE HOLES THRU WALL



$1\text{-}\frac{3}{8}$

$1\text{-}\frac{3}{16}$

$1\text{-}\frac{3}{16}$

$1\text{-}\frac{3}{8}$

$2\frac{1}{32}$



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$5\frac{13}{16}$