## OPERATING

## INSTRUCTIONS



## Type 1F HIGH SECURITY ELECTRONIC LOCK

Please read all directions carefully before putting your X-08 into operation.


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The X-08 uses sophisticated computer security and makes dialing much easier than that of traditional combination locks. The microprocessor in the lock recognizes a number as part of a combination when you stop dialing on that number and wait for the number to be registered. This enters the number into the computer's memory.

Your X-08 lock has been shipped preset in the Single Combination Mode with the factory combination of 50-25-50.

## LOCK ON BACK COVER

The Lock On Back Cover (LOBC) feature provides a locking mechanism that locks the back cover in place after installation. The design is such that the back cover cannot be removed without visible damage unless the combination is known, regardless of whether the lock is locked or unlocked.

> Note: Because of the LOBC feature, you cannot remove the cover to read the lock serial number after the lock is installed. Since you may need the serial number of the lock to reset it if the combination is lost or forgotten, it is important that you keep a record of the lock serial number in a secure place.

## To Remove the Lock on Back Cover:

1. Unlock the lock and retract the bolt in order to gain access to the back cover.
2. Release the container locking bolts.
3. Locate the unlocking button on the back cover.
4. Turn the dial to the left to extend the bolt.
5. Dial the combination(s) to open the lock, OP will appear.
6. Before turning the dial to the right to retract the bolt, pull out on the unlocking button.
7. While holding the button out, turn the dial slowly to retract the bolt to the unlocked position.
8. Remove the back cover screws.
9. Remove the back cover assembly.

## DIALING METHODS

The user should dial with complete full wrist turns. Stopping to regrip produces pauses in dialing activity. This helps the X-08 distinguish between human and robotic dialers.

The X-08 may mistake a human for a robot if the user dials more than 1.3 revolutions in the Clock Wise (CW) direction with no pauses in dialing activity.

Important: The X-08 has protective software that detects robotic dialing. If robotic dialing is detected, the $X$ - 08 will not open even if the correct combination has been dialed.

## TO POWER THE LOCK

You will always dial to the left (Counter Clock Wise) to "power" the lock. It usually requires 4-6 turns of the dial to generate sufficient power for lock operations. The lock is considered to be "powered" as soon as something appears on the display.

When you dial left to power the lock, it will first display any error conditions that exist on the lock (SA). Also, if the number of consecutive unsuccessful attempts is three or more, this count will be displayed once you stop dialing. The count will disappear when you dial right to resume operations.

> Caution: If you continue to dial left once the lock is powered, the successful openings count will appear. You should not dial this far unless you are specifically instructed to do so during an operational procedure. The necessary operating procedure may vary from the normal operating instructions if you dial this far, depending on the current condition of the lock.

Note: If a left arrow and dL (dial Left) appear at any time during dialing, you need more power to complete your operation. Dial left to generate power until the lock displays a right arrow and the previously displayed numbers or symbols(s).


## DIALING A COMBINATION

When dialing a combination, you will be prompted with E1, E2 and E3 for the first, second, and third numbers of the combination, respectively. Once the prompt for a number appears, dial to the right to select the appropriate number


> Note: When dialing to the right after the E1, E2, or E3 prompts, the first numbers to appear on the LCD will alternately be OO or 50 . Do not stop on these numbers the first time they appear if they are part of your three number combination. Continue to dial to the right until the number appears for the second time

If at any time the dial remains stationary for more than 10 seconds, the computer will reset (LCD will go blank) requiring the operator to redial the entire combination

Caution: An X-08 lock will register a Surreptitious Entry Attempt (SA) error condition when fifteen unsuccessful attempts to open the lock are made. The condition must be reset before the lock will operate normally. See the section on "Surreptitious Attempt".

## If You Pass Your Target Number When Dialing:

Example A: $\quad$ Target Number $=25$.
If you pass your target number by 10 or more, to 35 or greater, continue dialing until you reach the target number again.
Example B: $\quad$ Target Number $=25$.
If you pass the target number by no more than 9 numbers, to 34 or less, you may dial to the left and the display will "jump back" about 10 numbers. Now you may dial slowly to the right to the target number.

## If You Dial the Wrong Number:

Example A: When dialing, you pause on the wrong number for E1 or E2. E2 or E3 then appears on the display. Dialing left returns the display to E1 or $\mathbf{E} 2$ to allow redialing of that number in the combination sequence.
Example B: When dialing, you pause on the wrong number for E3. A lightning bolt is displayed to indicate an incorrect combination. Dial left before the lightning bolt disappears to return the display to E3 and allow the third number in the combination to be redialed.

## Redial Entire Combination If:

A. The screen goes blank before the lock bolt is retracted.
B. After backing up and redialing a correct number, a lightning bolt is displayed.

If you have not read the section on "Dialing the X-08", it is important that you do so before proceeding.

CW=ClockWise; CCW=CounterClockWise

1. Dial left (CCW) until lock is "powered". Stop. E1 will be displayed.
2. Dial right (CW) until the first number of the factory combination, 50, appears on the LCD.

Note: When dialing to the right after the E1, E2, or E3 prompts, the first numbers to appear on the LCD will alternately be 00 or 50 . DO NOT stop on these numbers the first time they appear if they are part of your three number combination. Continue to dial to the right until the number appears for the second time.

Stop on 50 and wait until E2 appears, approximately two seconds.
3. After E2 with a right arrow appears, continue to dial right until you reach the second number of the factory combination, 25. Stop on 25 and wait until E3 appears, approximately two seconds.
4. After E3 with a right arrow appears, continue to dial right until you reach the third number in the factory combination, 50.

> Note: When dialing to the right after the E1, E2, or E3 prompts, the first numbers to appear on the LCD will alternately be 00 or 50 . DO NOT stop on these numbers the first time they appear if they are part of your three number combination. Continue to dial to the right until the number appears for the second time.

Stop and wait until OP appears, approximately two seconds.
5. After OP with a right arrow (OPen right) is displayed, dial to the right to retract the lock bolt.

Practice opening the lock several times with the preset factory combination before you set a new combination. When you feel comfortable opening the X-08 using the preset factory combination, you are ready to put the lock into operation.

## X-08 LOCK SETUP

Setting up the X-08 lock for operation inovlves both the operating mode and the combination(s)
Before you can set a new combination, you must select and set a mode of operation. The X-08 has three modes of operation:

Single Combination Mode: The X-08 will open when one three-number combination is successfully dialed.
Dual Combination Mode: Two separate combinations are required to open the X-08. Either combination may be dialed first; however, the operator must begin entering the second combination within 10 seconds of completing the first combination.
Supervisory/Subordinate Mode or Super/Sub Mode: Two separate combinations are required to open the lock, with the Supervisory Combination controlling access of the Subordinate Combination. The Supervisory Combination must be entered first to UnLock (UL) the lock. Once the Supervisory Combination has been entered, the Subordinate Combination can be used to open the lock at any time during this "unlocked" state. The Supervisory Combination can be entered again to disable lock access - Lock Up (LU). In this state the Subordinate Combination will no longer open the lock.

## SET OPERATING MODE AND CHANGE COMBINATIONS

Use the Change Key (photo 1) provided with your X-08 to set the desired operating mode and combinations. If at any time during the process you see the Key and Lightning Bolt symbols displayed, stop sequence and return to Step 3. If at any time you see a Lightning Bolt symbol displayed, stop, remove change key and return to Step 2.
If you have not read the section on "Dialing the X-08" and "Opening the X-08 (Factory Combination)", it is important that you do so before proceeding.


1. Open the lock using the current combination(s), and remove the dust cover to gain access to the change key holes on the back of the lock.

Note: Use the preset factory combination of 50-25-50 to open the lock the first time.
2. Insert the Change Key into the change key holes on the back of the lock.

Note: Hold your thumb on the change key retractor while inserting the Change Key to ensure that the pins enter the lock and are not being pushed back into the Change Key.
3. Release the container locking bolts. (Different containers will have different release mechanisms.)
4. Dial left (CCW) until the Change Key appears in the upper right hand corner of the display along with E1 on the main part of the display.


Note: The lock will never open when the Change Key symbol is displayed.
5. Dial the current combination or combinations, example 50-25-50, as if dialing the combination to open the lock. If currently operating in Supervisory/Subordinate mode, enter the Supervisor's combination first.

Note: The lock serial number may be used instead of the combination if the combination has been forgotten. Using the serial number for this procedure will not open the lock. It will only allow you to set the new operating mode and combination(s).

The symbol SL (SeLect Mode) will now be displayed.
6. Dial right to select the desired mode of operation:

1 - for Single Combination mode
2 - for Dual Combination Mode
3 - for Supervisory/Subordinate Mode


Stop on the number of your selection and wait for the number to be registered, about 2 seconds. dL will appear.

Caution: Do not stop on zero when selecting mode. Also, it is not recommended that you "back up" when dialing to select the mode.

## If Selection = 1, Single Combination Mode:

7. Dial left until the symbol EC (Enter Combination) appears.
8. Dial right to dial the new combination as if dialing the combination to open the lock.

EXAMPLE: Set Combination to 30-60-90
E1 will appear.
Dial right to first number, 30. Stop. E2 will appear.
Dial right to second number, 60. Stop. E3 will appear.
Dial right to third number, 90. Stop.

The new combination will be displayed twice, two digits at a time, followed by PO.

Note: If the correct combination is not displayed, you may pull out the change key and the lock will allow you to reset the combination. You must pull out the change key while the display is still flashing. When EC appears, insert the change key again and dial the desired combination.
9. Pull out the Change Key. The Change Key symbol will disappear and dL will appear.
10. Dial left CC (Confirm Combination) will appear.
11. Dial right to dial the new combination again for confirmation. OP will appear. The new combination is now set.

If Selection = $\mathbf{2}$ or 3, Dual Combination or Super/Sub Mode:
In Dual Combination Mode: Either of the two combinations can be entered first.
In Supervisory/Subordinate Mode: Supervisory Combination must be entered first
7. Dial left until the symbol C1 (enter Combination 1) appears.
8. Dial right to dial the first new combination (Supervisory Combination if operating in Super/Sub Mode) as if dialing the combination to open the lock.

## EXAMPLE: Set Combination to 30-60-90

E1 will appear
Dial right to first number, 30. Stop. E2 will appear.
Dial right to second number, 60. Stop. E3 will appear.
Dial right to third number, 90. Stop.
The new combination will be displayed twice, two digits at a time, followed by dL.

Note: If the correct combination is not displayed, you may pull out the Change Key and the lock will allow you to reset the combination. You must pull out the Change Key while the display is still flashing. When C1 appears, insert the Change Key again and dial the desired combination.
9. Dial left until the symbol C2 (Enter Combination 2) appears.
10. Dial right to dial the second new combination (Subordinate Combination if operating in Super/Sub Mode) as if dialing the combination to open the lock.

## EXAMPLE: Set Combination to 25-50-75

E1 will appear.
Dial right to first number, 25. Stop. E2 will appear.
Dial right to second number, 50. Stop. E3 will appear.
Dial right to third number, 75. Stop.

The display will flash the new combination two times and then display the symbol PO (Pull Out Change Key).

Note: If the correct combination is not displayed, you may pull out the change key and the lock will allow you to reset the combination. You must pull out the change key while the display is still flashing. When EC appears, insert the change key again and dial the desired combination.
11. Pull out the Change Key. The Change Key symbol will disappear and dL will appear.
12. Dial left until CC (Confirm Combination) is displayed.
13. Dial right to dial the new combinations again for confirmation.

Note: In Dual Combination Mode you dial either combination first to confirm. In Super/Sub Mode you must dial the Supervisory combination first, and the Subordinate Combination second as you did when first entering the combinations.

When OP (OPen right) appears on the display, the new combinations have been set.

## IF YOU LOCK THE CHANGE KEY IN THE SAFE

If the door of your container is shut and the X-08 accidentally locked with the Change Key still inserted in the back of the lock, you can recover with the following procedure.

1. Dial left (CCW) until lock is "powered".
2. Dial right to dial the current combination. SL will be displayed.
3. Dial right to select ANY valid mode - 1, 2 or 3. (Do Not select 0) dL will appear.

4 Dial left continuously without pausing until E1 or C1 is displayed without the Change Key appearing in the upper right hand corner.

Note: Multiple symbols will be displayed during this dialing process and the LCD will go totally blank at one point. Finally, E1 and C1 will appear with the Change Key still showing in the upper right hand corner. It is imperative that you continue to dial until the Change Key disappears, leaving either E1 or C1 on the display, depending on the previous operating mode.
5. Dial right to dial the existing combination. OP will appear.
6. Dial right to retract the bolt. You may now restart the procedure to Set the Operating Mode and Change Combination(s)

Note: You cannot use the serial in place of the combination for this procedure. The combination must be known.

If you have not read the section on "Dialing the $\mathrm{X}-08$ ", it is important that you do so before proceeding.

## SINGLE COMBINATION MODE

In this mode the X-08 functions much like a standard combination lock. It will open any time the three-number combination is correctly dialed.

1. Dial left until lock is "powered".
2. Dial right to dial the combination.

## EXAMPLE: Combination $=\mathbf{3 0 - 6 0 - 9 0}$

E1 will be displayed.
Dial right to first number, 30. Stop. E2 will appear.
Dial right to second number, 60. Stop. E3 will appear.
Dial right to third number, 90. Stop. OP will appear.
3. Dial right to retract the lock bolt.

## DUAL COMBINATION MODE

In this mode, two combinations must be correctly and consecutively entered to open the lock. Either combination may be entered first; however, the second combination must be started within 10 seconds after the first combination is completed.

## First Operator:

1. Dial left until lock is "powered".
2. Dial right to dial the first combination.

EXAMPLE: Combination $=25-50-75$
E1 will be displayed.
Dial right to first number, 25. Stop. E2 will appear.
Dial right to second number, 50. Stop. E3 will appear.
Dial right to third number, 75. Stop. dL will appear.

## Second Operator:

3. Dial to the left until C2 (enter Combination 2) is displayed.

EXAMPLE: Combination $=\mathbf{3 0 - 6 0 - 9 0}$
E1 will be displayed.
Dial right to first number, 30. Stop. E2 will appear.
Dial right to second number, 60. Stop. E3 will appear.
Dial right to third number, 90. Stop. OP will appear.
4. Dial right to retract the lock bolt.

## SUPERVISORY/SUBORDINATE MODE

In this mode, two combinations must be correctly dialed to open the lock. However, it is different from Dual Mode because the Supervisory Combination must only be dialed once to UnLock (UL) the lock. Once the Supervisory Combination has been entered, the Subordinate
 Combination can be used to open the lock at any time during this "unlocked" state.
Whenever the Supervisory Combination is redialed, the lock will display LU (Locked Up), and the Subordinate Combination will no longer open the lock.

## To UnLock (UL)

## Supervisory Operator:

1. Dial left until lock is "powered".
2. Dial right to dial the Supervisory Combination as if dialing the combination to open the lock. EXAMPLE: Combination $=\mathbf{2 5 - 5 0 - 7 5}$

E1 will be displayed.
Dial right to first number, 25. Stop. E2 will appear.
Dial right to second number, 50. Stop. E3 will appear.
Dial right to third number, 75. Stop.
UL (UnLocked) is displayed indicating that the Subordinate Operator can now open the lock using only the Subordinate Combination. The X-08 will now operate as if it were in a single combination mode.

## To Open the Lock

## Subordinate Operator:

1. Dial left until lock is "powered".
2. Dial right to dial the Subordinate Combination.

EXAMPLE: Combination $=30-60-90$
E1 will be displayed.
Dial right to first number, 30. Stop. E2 will appear.
Dial right to second number, 60. Stop. E3 will appear.
Dial right to third number, 90. Stop. OP will appear.
3. Dial right to retract the lock bolt.

## To Lock Up (UP)

## Supervisory Operator:

1. Dial left until lock is "powered".
2. Dial right to dial the Supervisory Combination as if dialing the combination to open the lock. EXAMPLE: Combination = 25-50-75

E1 will be displayed
Dial right to first number, 25. Stop. E2 will appear.
Dial right to second number, 50. Stop. E3 will appear.
Dial right to third number, 75. Stop.
LU (Locked Up) will be displayed indicating the lock cannot be opened. The Subordinate Combination will not open the lock again until the Supervisory Combination is redialed to UnLock (UL) the lock once again.

## CORRECT METHOD OF CLOSING/RELOCKING CONTAINER

1. The door of the container is closed and the $\mathrm{X}-08$ bolt is extended by turning the dial left to lock the container.
2. Dial left one complete revolution of the dial.

The X-08 lock tracks the number of successful openings for the lifetime of the lock. It also tracks the number of consecutive unsuccessful attempts and willalert you upon lock power up if there have been 3 or more consecutive unsuccessful attempts to open the lock. The lock bolt must be extended and the lock allowed to power down prior to obtaining an audit count.

## TO CHECK THE NUMBER OF SUCCESSFUL OPENINGS

Start this process when the lock is powered down (i.e., the display is blank and there has been no dialing for 15 seconds with the lock bolt extended). The number of successful openings is a four-digit number that will be displayed two digits at a time.

1. Dial continuously to the left (CCW) until the LCD display alternately flashes two pairs of numbers. The number with the arrow flashing left represents the first two numbers of the successful openings count. The number with the arrow flashing right represents the last two numbers in the successful openings count.

Example: A display showing 00 (arrow left) and 15 (arrow right) means the lock has been successfully opened a total of 0015 times.

The number of successful openings will reflect the total number of times the lock has been opened since it was manufactured. When the lock has been opened 9,999 times, the next time that the lock is opened the count will begin again at 0 and continue to increment.

## TO CHECK THE NUMBER OF UNSUCCESSFUL ATTEMPTS

The X-08 keeps a record of the number of unsuccessful attempts to open the lock. This count will only be displayed when there have been three or more consecutive unsuccessful attempts. Start this process when the lock is powered down (i. e., the display is blank and there has been no dialing for 15 seconds with the lock bolt extended).

1. Dial left (CCW) until lock is "powered". If 3 or more consecutive unsuccessful attempts have occurred, a lightning bolt along with the two-digit count will be displayed.

Once the count has been displayed, you can dial right to get the E1 display and enter your combination.

Note: The unsuccessful attempts count resets to 0 only when the lock is successfully opened. If the number of unsuccessful attempts exceeds 99, the count will remain at 99 until reset.

## SURREPTITIOUS ATTEMPT

SA indicates that a Surreptitious Entry Attempt condition exists. An X-08 lock will register a Surreptitious Entry Attempt condition when fifteen unsuccessful attempts to open the lock are made. The condition must be reset using the Reset Combination before the lock will open and operate normally

## RESET SA CONDITION

Note: If in Supervisory/Subordinate mode, you must first dial the valid supervisor combination as required to set the lock to LU mode before attempting the Reset SA procedure. See "To Lock Up in Supervisory/Subordinate Mode".

If SA is displayed, then you will need to reset the Surreptitious Attempt using the following steps.

Note: The factory default for the Reset Combination is 50-25-50.

1. Dial continuously to the left (CCW) until the number of successful openings is displayed.
2. After the successful openings counter starts displaying, stop dialing. The display will change to show the unsuccessful attempts counter along with a lightning bolt and a right arrow.
3. Dial right to 99. E1 will appear.
4. Dial the Reset Combination as if dialing the combination to open the lock. A lightning bolt will appear.
5. While the lightning bolt is displayed (indicating power is still up), dial left until SA appears.
6. Dial the correct opening combination(s) for the lock, whether it be one combination for single combination mode, tow combinations for dual combination mode, or the supervisory combination (to put lock in UL mode) followed by the subordinate combination for Supervisory/Subordinate mode. The lightning bolt will continue to be displayed during this time.

The Surreptitious Attempt condition should now be reset.

## CHANGE THE RESET COMBINATION

This procedure is similar to changing a combination when operating in Single Mode.

Note: The Factory default for the Reset Combination $=50-25-50$.

1. Dial left (CCW) until lock is "powered".
2. Dial right to dial the combination(s) to open the lock.
3. Insert the Change Key into the back of the lock.
4. Release the container locking bolts.
5. Dial continuously to the left (CCW) until the number of successful openings is displayed. The Change Key symbol will also be seen in the upper right hand corner of the display.
6. Dial right to 99 . E1 will appear.
7. Dial right to dial the Reset Combination as if dialing a combination to open the lock. EC will appear.
8. Dial right to dial the new Reset Combination as if dialing a combination to open the lock. The new combination will be displayed twice followed by PO.
9. Pull out the Change Key. dL will appear.
10. Dial left. CC will appear.
11. Dial right to dial the new Reset Combination again for confirmation. OP will appear.

The new Reset Combination is now set.

## RECOVERING IF THE RESET COMBINATION IS FORGOTTEN

If you have an error condition on the lock that requires reset using the Reset Combination and you have forgotten the Reset Combination, you can change the Reset Combination using the serial number. First you must open the lock so that the Change Key can be inserted.

## To Open A Lock with an Error Condition:

In Single Combination Mode the lock can be opened by dialing the correct combination 5 times in a row successfully. The lock must stay powered between the combinations. A lightning bolt will be displayed between each combination.

If in Dual Combination Mode, both combinations must be dialed 5 times in a row successfully. Again, the lock must stay powered between the combinations.

If in Supervisory/Subordinate Mode, the lock can still be set between locked up and unlocked status with the Supervisory Combination. The lock needs to be in unlocked status and the Subordinate Combination dialed 5 times in a row successfully. Again, the lock must stay powered up between the combinations.

Once the lock has been successfully opened, the Reset Combination can be changed using the serial number.

## To Change Reset Combination using Serial Number:

1. Insert the Change Key into the back of the lock.
2. Release the container locking bolts.
3. Dial left until lock is "powered".
4. Dial right to dial the current combination(s) for the lock. ES (Enter Serial Number) will appear.
5. Dial right to dial the six-digit serial number of the lock just as you would dial the six-digit combination. EC will appear.
6. Dial right to dial the new Reset Combination. PO will be displayed.
7. Pull out the Change Key. dL will appear.
8. Dial left until CC appears.
9. Dial right to dial the new Reset Combination again for confirmation. OP will appear.

The new Reset Combination is now set.

Note: Changing the Reset Combination does not clear any error conditions on the lock. Once the lock has powered down, the new Reset Combination can then be used to reset error conditions.

ES
Enter Serial Number
SA
A Surreptitious Entry Attempt Exists
C1
Enter first Combination
C2
Enter second Combination

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