

Treadlok®

Electronic Logolok™

OPERATING AND PROGRAMMING INSTRUCTIONS

1. INTRODUCTION

The secret to the Treadlok Electronic Logolok lies in the ten (10) pressure sensitive keys hidden just below the surface of the Treadlok nameplate. Pressure on these precise spots communicates through a solid state logic board to the electric lock. With the Logolok locking system, there is no key to misplace, no complex numerical combination to remember, and no tedious dial to operate. You choose your own combination from the letters in the name Treadlok, out of more than two million possibilities.

When you want to open your security chest, you simply key in your combination through the Treadlok nameplate, turn the handle, and open the door.

These instructions will familiarize you with the operation of Logolok and how to program it for your own secret combination. Please take time to read them carefully and completely before attempting to set a combination and lock your safe. Acting too hastily might result in a lock-out which would require the services of a locksmith to correct.

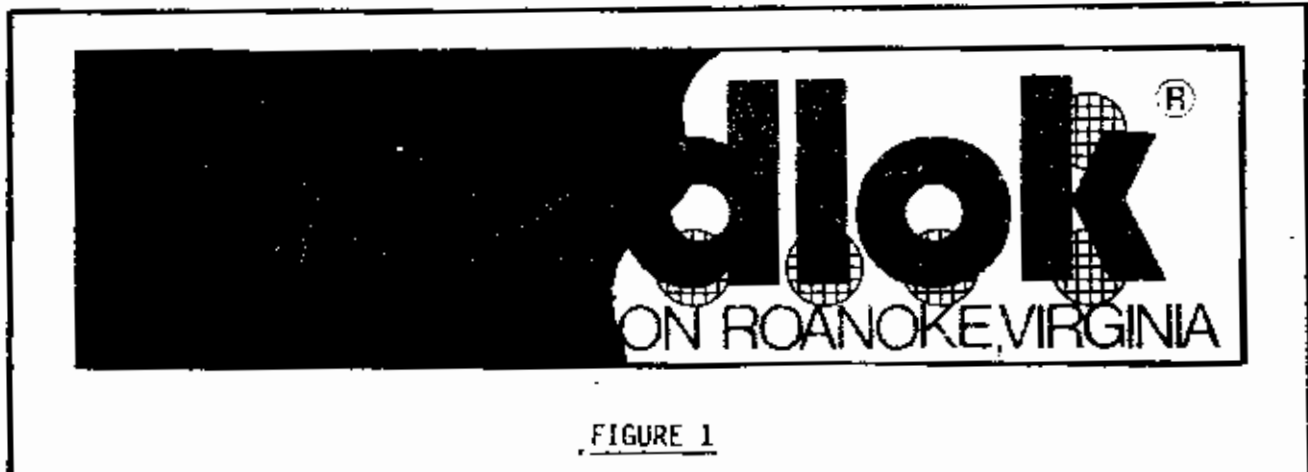


FIGURE 1

2. OPERATING INSTRUCTIONS

2.1 The Logolok Keyboard

As the cut-away drawing in Figure 1 illustrates, there is a round, pressure sensitive key positioned at the bottom edge of each of the eight (8) letters in the name Treadlok. These are the operating keys which you will press to enter your chosen combination. Additionally, there are two (2) more keys, one at the top of the letter "T" and one at the top of the letter "K". These two keys are "control keys" which are used to perform some special Logolok functions.

The movement of the Logolok keys is so minute, that it is nearly impossible to detect with your finger. However, the internal electronic logic board will respond with an audible tone each time it detects pressure on a key.

Take a moment to familiarize yourself with operation of the keys. Try pushing on the Treadlok nameplate with the tip of your finger at the precise locations shown in the cut-away drawing. You should hear a "beep" as you press each of the ten (10) key locations. Practice pushing the keys until you are comfortable with operation of the keyboard.

2.2 Opening a Logolok Safe with "Control K"

All new Logolok Security Safes come from the factory with a removable shipping jumper in place on the electronic logic board. This jumper allows the safe to be opened by simply pressing the "Control K" key (the top of the "K"). To do this, press the "Control K" with one hand and hold it down--you should hear a steady audio tone--while operating the safe handle with the other hand.

Operation of the safe handle is a two step process. First, apply slight pressure on the handle in a counter-clockwise (upward) direction to release the electric locking mechanism, then proceed to rotate the safe handle clockwise from its 3 o'clock locked position, to about the 4 o'clock position to open the safe. The safe handle will automatically relock when it is rotated back to the locked position.

2.3 Opening a Logolok Safe with a Programmed Combination

The operation of opening the safe using Logolok is as simple as dialing a phone. Simply press each key in your combination, in sequence, and turn the handle to open the safe.

When you push the first key in your programmed combination, the electronic logic circuit starts a ten second timer. After ten seconds, the logic circuits will automatically reset. If you have not entered your combination and opened the safe during this time period, the safe will remain locked. This feature insures that your safe cannot inadvertently be left unlocked.

2.4 Logic Circuit Reset with "Control T"

If you make a mistake part way through entering your combination, you can manually reset the logic circuits by pressing the "Control T" key (the top of the "T"). Then simply start over and enter your combination from the beginning. If you choose, you can always begin your combination entry sequence by pressing "Control T", thus ensuring that the logic circuits are properly reset.

2.5 Testing the Battery with "Control T"

The Electronic Logolok is powered by a standard 9 volt transistor battery. The internal battery should last from six months to one year under normal use. Logolok includes a built-in battery test feature that is activated from the keyboard by pressing the "Control T" key (the top of the "T"). If you hear an audio tone when you press this key, the battery condition is fine. If you do not hear a tone, or if the tone diminishes and stops almost immediately upon pushing the key, the battery is getting weak and should be replaced. Normally, it will still open the safe many times even after failing the battery test.

2.6 The Tamper Indicator and "Control K"

Every time you open your safe with your programmed combination, the electronic logic circuits will reset the tamper indicator to "off". Any subsequent operation of the keyboard, other than entering the correct combination, will turn the tamper indicator "on". The setting of this indicator can be interrogated from the keyboard by pushing the "Control K" key (the top of the "K"). If no audio tone is heard,

the tamper indicator is off, indicating that the keyboard has remained untouched since your last access to the safe. If an audio tone is heard, however, you will know that someone has been tampering with your Logolok safe.

2.7 The External Battery Cable

In the unlikely event that the Logolok internal battery fails completely, each Logolok safe is shipped with a short battery cable that can be connected to a fresh 9 volt transistor battery, just like the battery used inside the safe. This cable and battery can provide temporary power to the internal electronics from outside the safe. When the cable is plugged into the small hole located on the lower right face of the door, the safe can be opened with the combination in the normal manner. After opening the safe using the cable, the internal battery can be easily replaced.

CAUTION: The battery cable should be stored somewhere other than inside the safe, so that it will be available if needed.

Note: The battery test ("Control T") is not valid while battery power is supplied through the external battery cable. The battery being tested must be installed in the internal battery holder.

2.8 Replacing the Internal Battery

→ The Logolok battery should be replaced with a good quality 9 volt alkaline transistor battery, available anywhere batteries are sold. To replace the battery, open the safe and remove the access cover to the electronics compartment. The 9 volt battery holder is located at the bottom left edge of the electronic logic board. When installing a new battery, be sure that the battery connector on the battery engages fully with the connector on the logic board. After installing a new battery, perform the battery test procedure before replacing the access cover, just to be sure your new battery is in good condition.

2.9 The Electronics Compartment

The Logolok electronic logic board is mounted on the inside of the door of the safe, just a few inches down from the top. To get to the logic board, for setting the combination or replacing the battery, you need to remove the small access cover which is attached to the

inside of the door. It is not necessary to remove the large cover plate that covers the entire inside surface of the door.

CAUTION: Always be careful of static electricity when the electronics compartment is open. You must never allow a static charge, like the spark that jumps from your finger to a door knob after walking across a carpeted floor, to pass from your fingers to the electronic logic board, as this may damage some electronic components. To avoid this possibility, always touch the metal of the safe door to discharge any static charge before touching the logic board.

3 PROGRAMMING INSTRUCTIONS

3.1 Selecting a Combination Word

The Electronic Logolok can be programmed with any one of over two million possible combinations. Each combination is a seven letter "word" formed from the letters in the name Treadlok. The letter sequence you choose does not have to form a properly spelled word, and you can repeat letters as often as you like. For example, REALTOR, DOLLARR, and AAAOAAA are all good combinations.

Choosing a combination "word" may seem tricky at first, but there are some techniques that you can use to help. For example, the word DOLLAR has only six letters, but by doubling the last letter to form DOLLARR, a seven letter "word" is formed. Another approach is to skip over letters in a word that are not available in "Treadlok". In this manner, ROANOKE could become ROAOKEE by dropping the N and doubling the E, but the "word" can still be remembered as ROANOKE. While the combination is being keyed in, the N can be skipped over when you come to it, and the E doubled at the end.

Of course, words can be spelled backwards, short words can be combined, and similar looking or sounding letters can be substituted (a K for a C, for instance). Or numbers can be assigned to the keys, and a suitable number, like a telephone number, can be transcribed into a "word". Any sequence of seven letters will do, provided you can remember it or reconstruct it.

Take some time with your "word" selection. This feature of Logolok is what makes it truly unique, and choosing your secret combination should be viewed as an enjoyable challenge.

3.2 The Programming Pinboard

Combination programming is accomplished by inserting small brass pins, called shorting pins, into small holes on the programming pinboard, using the plastic tool supplied with the safe. The pinboard is mounted on the electronic logic board in the upper right-hand corner, next to the keyboard connector (refer to Figure_2).

The programming pinboard has 100 holes arranged in ten (10) vertical columns and ten (10) horizontal rows. Each of the holes in the pinboard can be identified by the column and row that intersect at its location. Examine the programming pinboard and notice that the columns and rows are identified with numbers and letters printed on the circuit board, just above and to the left of the pinboard.

The rows are marked T, R, E, A, D, L, O, K, SEQ, BATT SAVE. The first eight (8) rows correspond to the letters in the name Treadlok, from which your combination "word" will be chosen. The last two rows, marked SEQ and BATT SAVE, are for programming some optional features that will be covered later. For now, just ignore them.

The columns are marked 1, 2, 3, 4, 5, 6, 7, LONG, SHORT, OFF. The first seven (7) columns correspond to the position of a letter in a particular combination "word". The last three rows, marked LONG, SHORT, and OFF, are also used for programming optional features which will be covered later.

3.3 The Programming Pin/Tool Assembly

The pin/tool assembly (refer to Figure_3) consists of a hollow plastic holder and a set of fifteen brass pins which are connected tip to head and stored inside the holder. By pushing on the brass pins with your thumbnail in the cutout area near the tip of the tool, the pins can be made to exit through the slot in the insertion tip.

When a pin is inserted into a hole in the board, it is broken away from the tool by moving the tool from side to side. Then a new pin is pushed out of the tool and the procedure can be repeated. Refer to Figure_4 for instructions on inserting shorting pins in the pinboard. Note that you must grip the tool firmly when you are inserting pins in the pinboard, to prevent the slot in the tip from spreading and the pin from sliding back into the tool.

The tool can also be used to extract pins previously installed if you wish to change the combination once it has been set (refer to Figure_5). However, Logolok comes from the factory with two pins

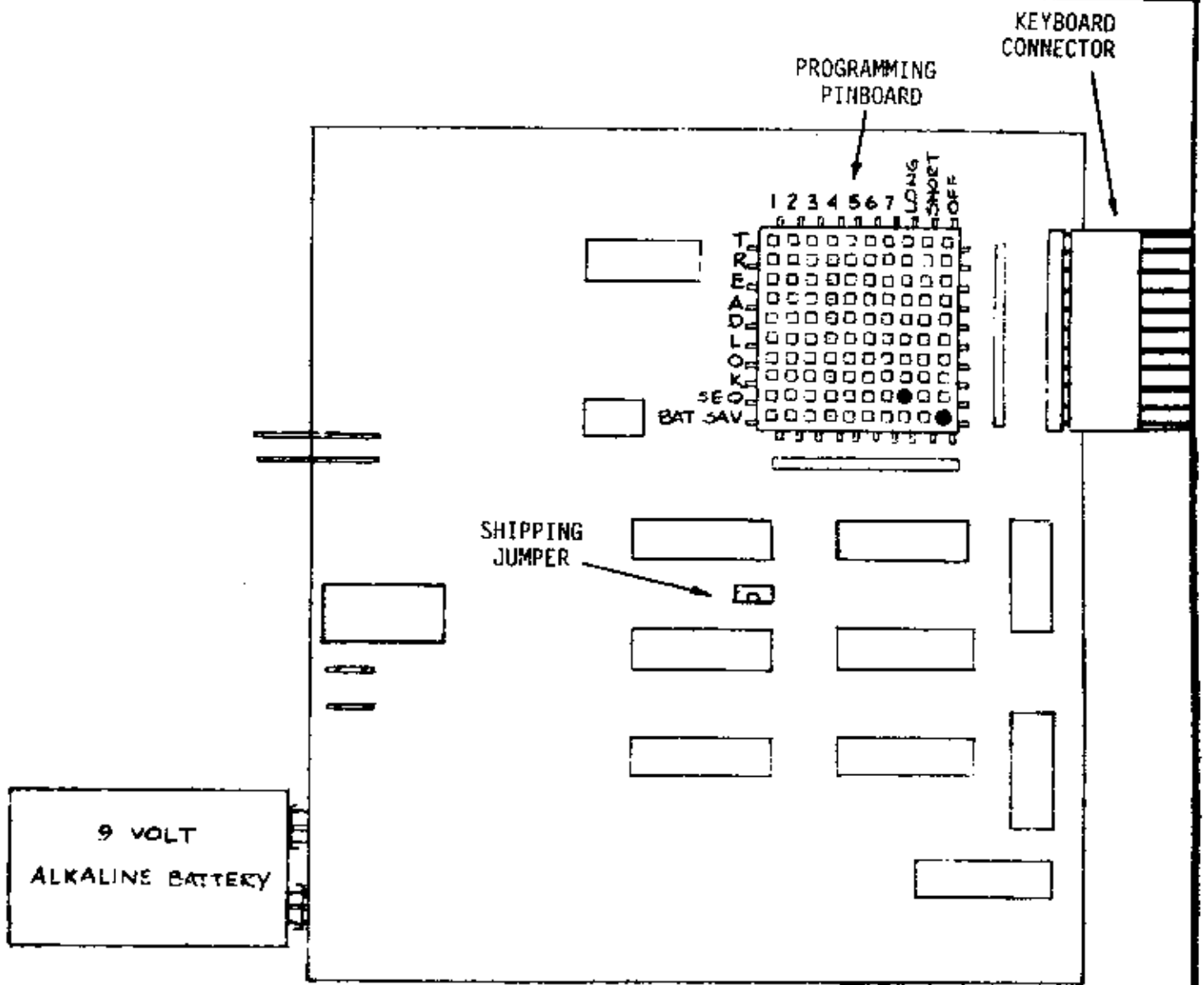


FIGURE 2, ELECTRONIC LOGIC BOARD

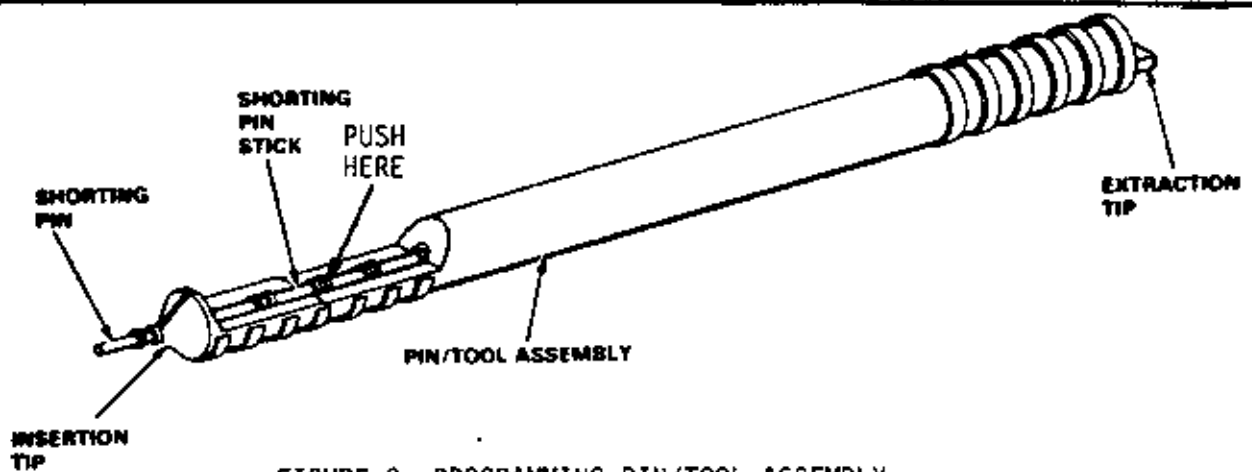
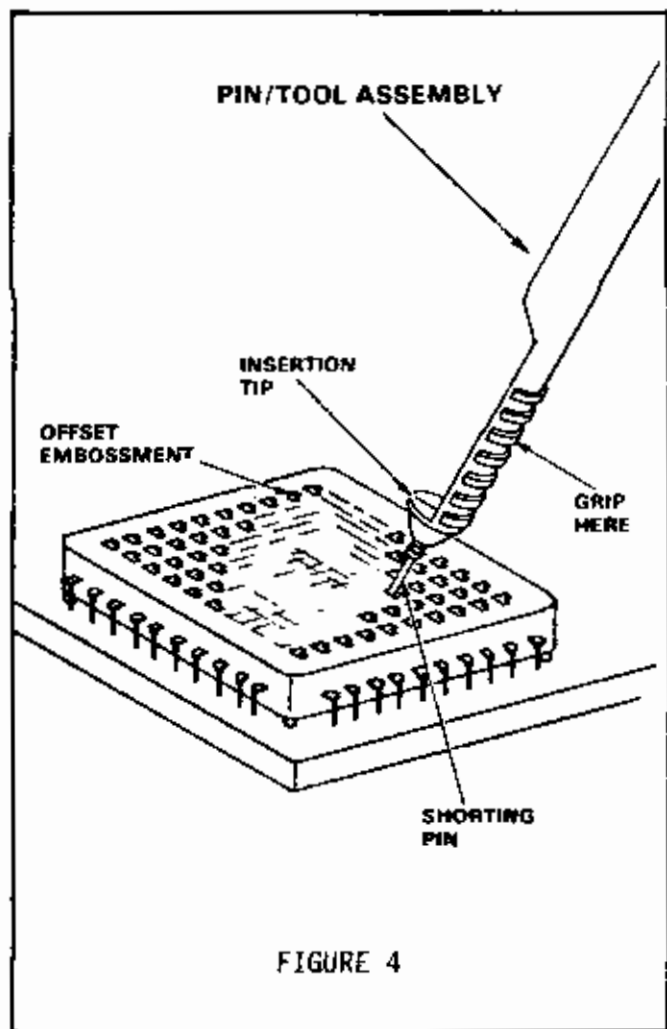


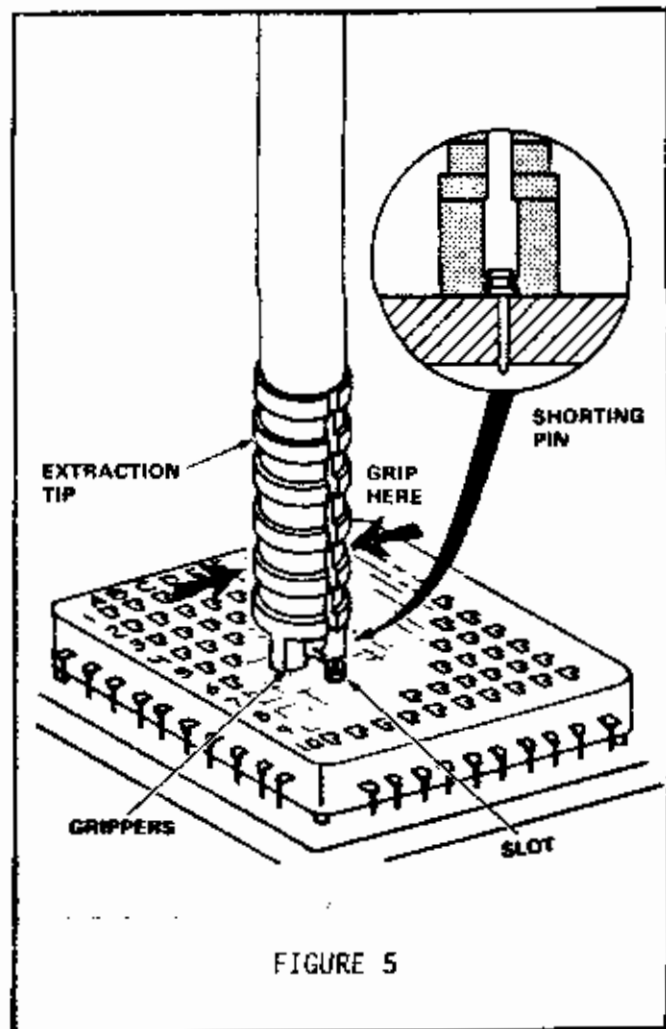
FIGURE 3, PROGRAMMING PIN/TOOL ASSEMBLY



INSERTING SHORTING PINS

Determine which numbered and lettered circuits of the pinboard are to be commoned, then obtain a pin/tool assembly and proceed as follows:

1. Push the shorting pin stick toward the insertion tip until the tip spreads and a pin head exits.
2. Firmly grip the sides of the tool and, holding the tool at a slight angle to the opposite corner of the offset embossment, start the shorting pin into the pinboard. See Figure 4
3. After the shorting pin is started, raise the tool so it is aligned with the hole in the pinboard and push shorting pin in until shorting pinhead bottoms on the pinboard. Maintain side grip on tool throughout operation.
4. Holding the tool tips together, move the tool from one side to the other until the shorting pin snaps off.



REMOVING SHORTING PINS

Pins can be removed with the extraction tip of tool or with needle-nose pliers or similar type tool.

1. Determine which shorting pin is going to be removed and place extraction tip next to or above shorting pin.
2. Move the extraction tip onto pinhead and align grippers with slot on pinhead.
3. Firmly grip the two halves of the extraction tip and pull pin straight out of pinboard.
4. Discard extracted pin. If replacement is required, use a new pin.

installed in the lower right of the programming pinboard, and you should not remove these pins unless instructed to do so.

3.4 Programming Your Combination

By now you will have familiarized yourself with the operation of the Logolok keyboard, the layout of the programming pinboard, and the use of the programming tool. Be sure to observe the caution about *static electricity explained in the section on the Electronics Compartment*. Once you have selected the combination "word" you wish to use, you can proceed to program it as follows:

Write your combination "word" down on a piece of scrap paper that you can later throw away. Then write the numbers one through seven above the letters in your "word". This will help you keep track of the position of each letter as you program it.

Starting with the first letter of your combination "word", move down the first column of holes in the pinboard to the row identified by that letter, and insert a shorting pin in that hole. Proceed in the same manner with the second letter in the second column, the third letter in the third column, and so on.

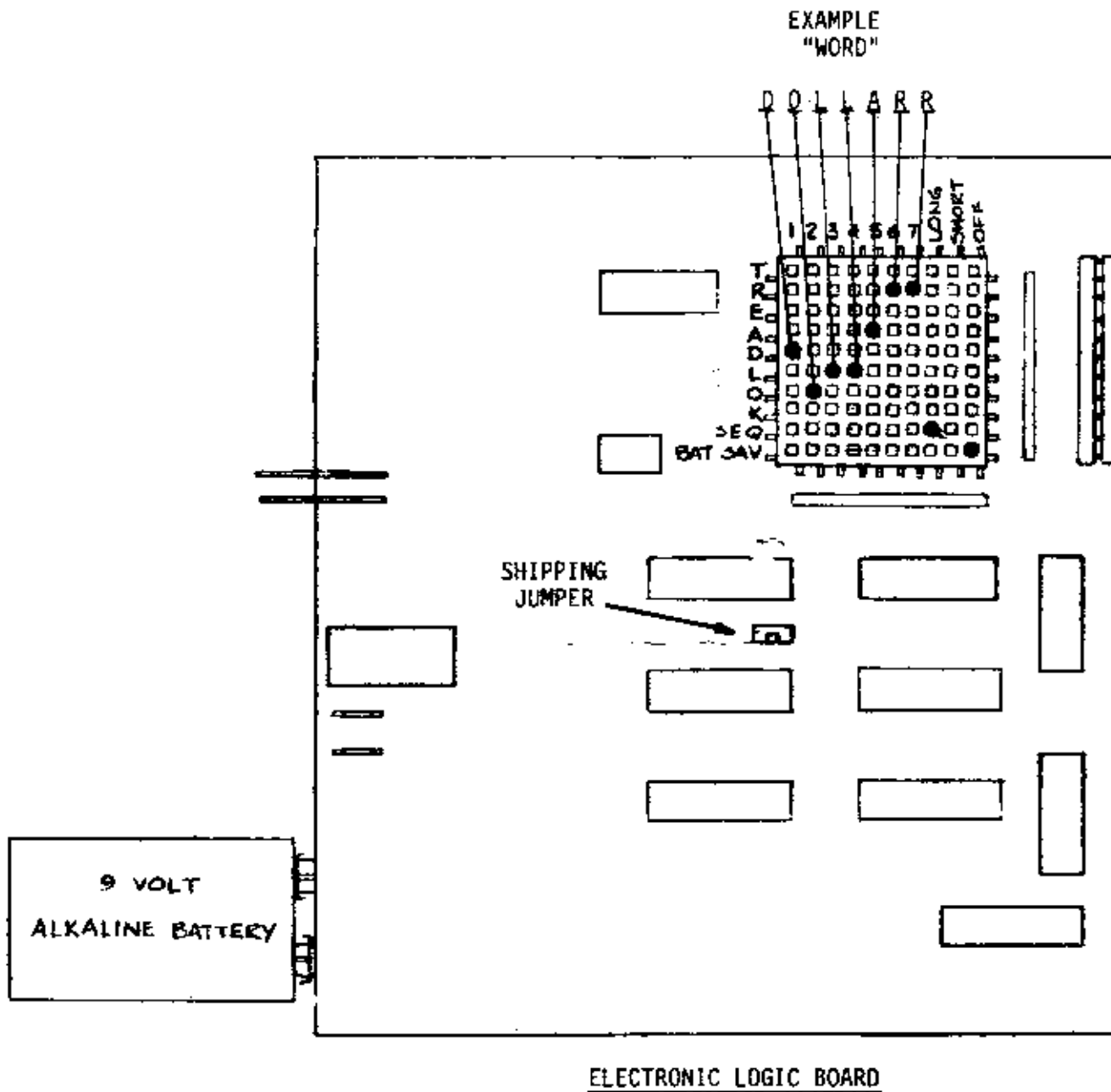
Refer to Figure 6 for an example of shorting pin locations for the word DOLLARR. In this example, the first column has a pin inserted in the fifth row, which corresponds to the letter D. The second column has a pin inserted in the seventh row, which corresponds to the letter O, and so on, up through the seventh column with its pin in the second row, corresponding to the letter R. The last three columns are left as set at the factory.

When you have inserted one pin in each of the seven columns, you have completed programming of your combination. If you later want to change a combination, remove the shorting pins that must be relocated, and insert new pins where required. Now, try your combination several times by locking and unlocking the safe's boltwork with the door to the safe open.

CAUTION: Do not close the door to your safe until you are sure that the combination you have programmed will work.

3.5 Removing the Shipping Jumper

After you have programmed your combination, and checked it out, you can remove the shipping jumper from the electronic logic board. The jumper is identified by a white tag tied to it with a piece of



Example shows the pin locations for programming the combination "word", DOLLARR.

FIGURE 6, EXAMPLE COMBINATION

string. Pull on the string and the small plastic jumper will slide off of its pins. Removing this jumper disables the "Control K" key which allowed access to the safe without a programmed combination.

4. OPTIONAL FEATURES

4.1 The Short Combination Sequence

All Logolok safes leave the factory with the combination "word" length set at seven (7) letters, which results in over two million possible combinations. As an alternative, Logolok can be reprogrammed to a five (5) letter combination. This option results in a combination that may be a little easier to enter or remember.

To program this short sequence option, a shorting pin must be inserted into the hole at the intersection of column 9, labeled SHORT, and row 9, labeled SEQ. Then, the shorting pin must be removed from the hole at the intersection of column 8, labeled LONG, and row 9, labeled SEQ.

CAUTION: You must be sure that you do not wind up with both the LONG and SHORT sequence holes with pins in them, or both of the holes without pins. Either condition will render the lock inoperable.

After changing the sequence length and reprogramming your combination, try your combination several times by locking and unlocking the safe's boltwork with the door to the safe open.

CAUTION: Do not close the door to your safe until you are sure that the lock will operate properly with the changes you have made.

4.2 Battery Saver Feature

Under normal operation of Logolok, the safe's electric unlocking mechanism is energized when the last letter in the combination "word" is entered. The mechanism remains energized until the ten second timer, which started timing with the entering of the first letter, resets the electronic logic circuits. Thus, the battery is supplying power to the unlocking mechanism for several seconds every time the safe is opened.

The battery saver feature, when implemented, eliminates some of this power requirement, significantly extending the battery life if

the safe is opened frequently. When the battery saver is turned on, opening the safe is accomplished in the normal manner, with the additional step of pressing and holding the "Control K" key with one hand while rotating the safe handle with the other hand. This two handed operation is less convenient, but the battery supplies power to the unlocking mechanism only while the "Control K" key is depressed.

To turn the battery saver "on", remove the shorting pin from the pinboard hole at the intersection of column 10, marked OFF, and row 10, marked BATT SAVE. Turning the battery saver "off" again is accomplished by installing a new pin in the same hole.

Table of Contents

1	INTRODUCTION	1
2	OPERATING INSTRUCTIONS	2
2.1	The Logolok Keyboard	2
2.2	Opening a Logolok Safe with "Control K"	2
2.3	Opening a Logolok Safe with a Programmed Combination	3
2.4	Logic Circuit Reset with "Control T"	3
2.5	Testing the Battery with "Control T"	3
2.6	The Tamper Indicator and "Control K"	3
2.7	The External Battery Cable	4
2.8	Replacing the Internal Battery	4
2.9	The Electronics Compartment	4
3	PROGRAMMING INSTRUCTIONS	5
3.1	Selecting a Combination Word	5
3.2	The Programming Pinboard	6
3.3	The Programming Pin/Tool Assembly	6
3.4	Programming Your Combination	9
3.5	Removing the Shipping Jumper	9
4	OPTIONAL FEATURES	11
4.1	The Short Combination Sequence	11
4.2	Battery Saver Feature	11