

Memory Mini-Prox
STANDALONE
PROXIMITY ACCESS CONTROL SYSTEM
Model 4140-OL

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Operating Guide
Toye Corporation

NOTES

NOTES**Memory Mini-Prox
Operating Guide****Table of Contents**

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User Information

Following statement will be provided with the equipment as required by Article 6.3 of the TTE Directive, 1999/5/EC.

• Factory Ray Model No. 7004 is in conformity with all essential requirements of the R&TTE Directive (1999/5/EC).

• product is marked with **CE** **1000** which signifies conformity with Class II product standards specified in the R&TTE Directive.

• Following table indicates the areas of intended use of the equipment. Intended countries are not listed. For countries not included in this list, please contact the responsible functions department Agency.

EU	Country of intended use		Country	Yes	No
	Yes	No			
Austria	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Austria	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Belgium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Belgium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Denmark	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Denmark	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Finland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Finland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
France	<input checked="" type="checkbox"/>	<input type="checkbox"/>	France	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Germany	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Germany	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Greece	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Greece	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ireland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ireland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Italy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Italy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Latvia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Latvia	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lithuania	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lithuania	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The Netherlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Netherlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Poland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Poland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spain	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sweden	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sweden	<input checked="" type="checkbox"/>	<input type="checkbox"/>
United Kingdom	<input checked="" type="checkbox"/>	<input type="checkbox"/>	United Kingdom	<input checked="" type="checkbox"/>	<input type="checkbox"/>


 Peter Müller
 Head of Marketing
 Medical Marketing AG

DECLARATION OF CONFORMITY

Mrs. Secura Key, A Division of Securix Inc.

of 2047 Marshall Street, Chateausville, CA 91311, USA

declares under our sole responsibility that the product

Secura Key 4140 (PK-1040)

in its entirety, including variants, is in conformity with the following standards and/or other normative documents.

EN 50135-3-3, May 1999
 EN 50135-3-5, June 1999
 EN 50135-3-6, June 1999

We hereby declare that all essential requirements have been carried out and that the above named product is in conformity to all the essential requirements of Directive 1989/39/EEC.

The conformity assessment procedure referred to in Article 14(1) and detailed in Annex IV of Directive 1989/39/EEC has been followed with the involvement of the following Notified Body(s):

BABT, Wilmslow House, 14 Malpas Road, Wilmslow, Cheshire, ST12 8RQ

name and address of Notified Body

Identification mark: 0100 This equipment will also carry the  Class 2 equipment identifier

The technical documentation referred to for the above equipment can be made available for inspection on application to:
 Yashwanth, Laxmi Maheshwari 13, Industrial Estate, Wigginton,
 2004 Bristol, England

name and address of EC representative


 Jay Chander
 Product Marketing Manager

 R. Chander
 (Signature of authorized person) 11/30/00

INTRODUCTION

The Model 4140-OL is a programmable single-door access control system which controls access for up to 65,000 users. It can control an electric strike, magnetic lock, or gate operator, and has an additional programmable input which may be set as a remote open input or as an LED/Beeper control for use with the Wiegand output. A Wiegand output is also provided to allow for later upgrading to an on line system. Information on using the 4140-OL as a Wiegand reader is contained on page 17. The major components are shown in Figures 1 and 2.

The Model 4140-OL Access Control Unit contains the CPU, memory, access relay, and an internal reader. It has a beeper, and a bi-color LED indicator. 4140-PD Program Deck (not included), is used to add or delete transponders, to set the operating mode, to program the password and latch timer. The **Model 4140-OL** is compatible with the Smart Relay, an intelligent relay module used to eliminate the possibility of break-in by attacking the access control unit.



Figure 1 - Memory Mini-Prox

FCC ID: NNHRK-100M

INSTRUCTION TO THE USER

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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

CE168®

Environment

Ambient Temperature	-40 to +70 C (-40 to +158 F)
Humidity	0% to 100%

Operational

Reading Distance

Molded Card: Up to 6" (15.24 cm)
Key tag & ISO Card: Up to 5" (12.70 cm)

User Capacity

65,000 key tags or cards (26 or 32 bit),
10 Facility Codes

Card/Key Tag Operation

Passive

Transmit Frequency

125 kHz

Memory

Non-Volatile

Latch Timer

Programmable
0.25 seconds to 18 hours
or Toggle Mode

Accessories

4140-PD	Proximity Programming Deck
4140-PS	9VDC, 200 mA, plug-in Power Supply, 120 VAC Input. For Access Unit Only.
4140-SR	Smart relay module, DPDT.

This product complies with UL 294 Standards, with Part 15, Class B FCC Rules and meets R&TTE Requirements (European Standards).

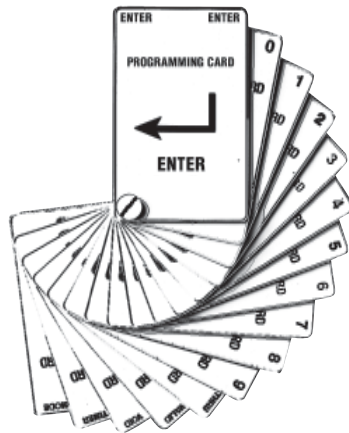


Figure 2 - Programming Deck

ORDERING TRANSPONDERS

The 4140-OL works with standard molded (clamshell) cards, ISO-standard cards and key ring tags. Card Format 303 and Format 201 can be used.

When you order standard transponders for a new project you will be assigned a new Facility Code and your transponders will begin with ID number 1. As you need additional cards or tags you can order the same Facility Code, specifying the starting number, which will be one digit higher than your highest existing transponder.

SPECIFICATIONS

Models **4100 Memory Mini-Prox**

Physical

Depth	0.51" (1.30 cm)
Width	1.60" (4.06 cm)
Height	3.50" (8.89 cm)
Weight	2.88 oz. (81.65 gm)
Material	ABS
Color	Gray

Power Requirements 5-14 VDC, 100mA

Wiegand Output Any Wiegand Format up to 40 bits
Maximum Distance: 500 Ft.- 5 or 6 conductor 20 gauge shielded cable

Outputs

SPST Solid State Relay, 1A max. @60 VAC or DC.
Normally open or normally closed (field programmable).
May also be used with SecuRelay™ intelligent relay module (sold separately).

Inputs

Programmable as Remote Open (requires contact closure);
Bicolor (Red or Green) LED Control or Buzzer/LED Control

WARRANTY (U.S. and Canadian)

“This product is warranted against defects in materials and workmanship for a period of 2 years from the date of purchase. Toye Corporation shall, at its option, either replace or repair this product, if returned to us freight prepaid within the warranty period. This warranty does not include freight, taxes, duties, or installation expenses. THE WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. TOYE CORPORATION SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The remedies provided herein are the buyers’ sole and exclusive remedies. In no event shall Toye Corporation be liable for direct, indirect, special, incidental or consequential damages (including loss of profits), whether based on contract, tort or any other legal theory.” Contact Toye Corporation for Card/Tag and Export Warranty Policies.

PROGRAMMING THE 4140-OL

Transponders (Key tags and cards) are pre-encoded and engraved at the factory with a Facility (Site) Code and an individual card ID number.





You must teach the 4140-OL which Facility Code or Codes (up to 10) it should recognize. You must also enroll the card ID numbers that will be Valid. The 4140-OL cards and tags are sequentially numbered, so you can validate a block of transponders.

Be sure to make a record of each person who is issued a transponder along with the ID number of their card or tag.

The 4140-PD Program Deck

Note: The 4140-PD is required to program the reader. One 4140-PD may be used on several readers.

The 4140-PD consists of the 16 following cards:

 ENTER	"7"	SEVEN
"0" ZERO	"8"	EIGHT
"1" ONE	"9"	NINE
"2" TWO	 THRU	
"3" THREE	"+"	VALID
"4" FOUR	"-"	VOID
"5" FIVE	 SETTIMER	
"6" SIX	 MODE	

Presenting these cards to the **Memory Mini-Prox** is equivalent to pressing keys on a Keypad or key board. As you present program cards to the unit, it will chirp to indicate that it has read the card. The next sections of this manual explain the program card sequences used to perform the various program functions.

BASIC OPERATION

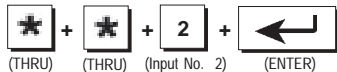
To use a Key Tag with Memory Mini-Prox, simply hold your Transponder near the **4140-OL**. The Unit generates an RF field, which causes the Key Tag to transmit a unique Transponder ID Number back to the Unit.

If the Transponder ID Number is stored in memory, the latch relay is activated, unlocking the controlled door or gate. A green light and a beep indicates that access is granted. If the Transponder ID Number is not stored in memory, the door or gate remains locked and a red light and beep indicate that access is denied. Otherwise the LED is normally off.

Remote open (Request to Exit) input

When the Remote open input is activated, the relay will activate. When the remote open input is deactivated, the relay will return to the inactive state after the latch timer times out. A green light and a beep indicates that access is granted. NOTE: Remote Open Input is disabled when the unit is configured for use with the Smart Relay.

following sequence would be followed:



PROGRAMMING HINTS

Setting the Latch Timer

The latch timer controls the latch relay. The factory preset latch time is 1 second but it can be changed to any value from .25 seconds to 18 hours. If the latch timer is set to 0 seconds, this pulses the latch relay for 0.25 second, sufficient for most electric turnstiles. The beeper and LED are always fixed at one second.

Setting the Operating Mode

Four operating modes are possible. For normal operation select Mode 1; to temporarily lock out all transponders, select Mode 2; to hold the door open continuously select Mode 3; to function as a toggle switch select Mode 4.

PROGRAMMING STEPS

To program the **4140-OL**, you must first enter the program mode as described in the next section below. Once in the program mode, the LED will blink amber as an indicator. To take the unit out of program mode you may select an operating mode (see page 14) or simply allow 15 seconds to elapse without presenting a program card to the reader.

After you have completed a proper program sequence, the unit will beep and the LED will flash green to indicate that the program instruction has been accepted. A red light and a beep at the end of a programming sequence means that you have made an error. Refer to the appropriate section, and carefully re-enter the command in the proper sequence.

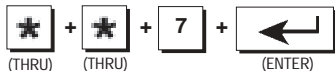
NOTE: User ID Number and ID Number Values in the following examples are for demonstration purposes only; enter the appropriate values for your system.

relay is used for a “fail-secure” electric lock or door strike and to trigger a gate operator. A normally closed relay is used for “fail-safe” devices such as magnetic locks. The Smart Relay(sold separately) is a remote intelligent relay used to prevent entry when the access control unit is physically attacked. (NOTE: When placed in the Smart Relay mode the “Remote Open” input is disabled.) To configure the relay, put the unit in the Program mode (See Page 8). Present the **THRU** card to the unit two times. Then present either the “6”, “7” or “8” card to the unit. Present the **ENTER** card.

Selections are:

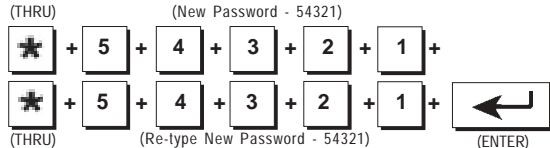
6. Normally Open (Factory default)
7. Normally Closed
8. SecuRelay™ Option.

For example, to configure the relay normally closed, the following sequence would be followed:



Using the 4140-OL as a Wiegand Output Reader

The 4140-OL can be connected to a multidoor access control system (such as Access Anywhere) using the Wiegand output. When any Toye transponder is presented to the unit, whether



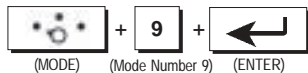
Lost or forgotten Password

If the password is lost or forgotten, it can be restored to the factory default (12345). Remove the **Memory Mini-Prox** unit from the wall and disconnect power. With the Data 1 line (white wire) temporarily connected to the Remote open line (brown wire), restore power. The factory default (12345) is now in effect. The LED will flash alternately Red and Green. While this is occurring, set the Facility Code or Codes in the reader (see below). Remove power and reconnect the unit for operation, restore power and remount the unit. This procedure will **NOT** delete any transponders from reader's memory.

Setting Facility Code(s)

Before any cards are added to the 4140-OL you must set the Facility Code or Codes. When a new reader is first powered up the LED should be flashing alternately Red and Green. This indicates that the unit is in the “Learn Facility Code” mode. You can also place a reader in this mode by entering the

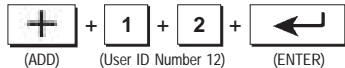
Program Mode (see page 8) then presenting the Mode card followed by the 9 card followed by the Enter card.



While the LED is flashing Red/Green present one User Card for each Facility Code being used to the reader, one at a time. After you are finished, allow the reader to time out and return to the Normal Mode before proceeding.

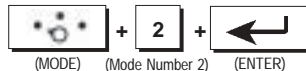
Add A Transponder (Key Tag or Card) To The System

Place the unit in the Program Mode (See Page 8). Present the Add card to the unit, followed by the sequence of numbers representing the Transponder ID number. Then present the Enter card to the unit. For example, to add transponder #12 to the reader the following sequence would be followed:



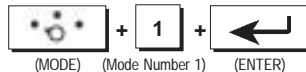
Transponder number 12 is now valid.

(See Page 8). Present the **MODE** card to the unit. Then present either the “1”, “2”, “3”, or “4” card to the unit. Present the **ENTER** card. The Access Control Unit will exit Programming Mode and enter the selected Mode. For example, to set the unit to the inactive (locked) mode, the following sequence would be followed;



To Exit Programming Mode Immediately:

Present the **MODE** Card to the unit. Then present the “1” (or 2, 3, or 4) card to the unit. Present the **ENTER** card. This returns the unit to the selected mode immediately, bypassing the 15 second timeout.



Configure the Relay

The relay is set at the factory to be normally open and to close upon presentation of a valid transponder or upon activation of the remote open (Request to Exit) input. It may be changed to normally closed or to Smart Relay operation. A normally open

Set the Operating Mode:

The **Memory Mini-Prox** may be put into any of four operational modes. The Modes are as follows;

- “1” - Active (Normal) -- LED is Off
- “2” - Inactive (Locked) -- LED blinks Red
- “3” - Door Unlocked -- LED blinks Green
- “4” - Toggle Mode – LED is Off

In mode 1, a valid tag or closure of the remote open input will activate the relay for the time the latch timer is set.

Mode 2 deactivates the unit. No tag can activate the relay, but the remote open input will activate the relay.

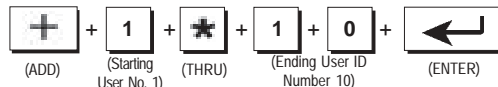
In mode 3, the door is kept unlocked (the relay is kept latched).

In mode 4, when a valid tag is presented or the remote open input is activated, the relay changes its state from deactivated to activated or from activated to deactivated. The relay will stay in this state until another valid tag is presented or the remote input is activated and so forth.

To set the Operating Mode, put the unit into the Program mode,

Add A Series Of Transponders To The System

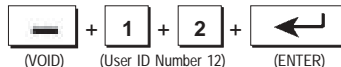
Place the unit into the Program mode (see Page 8). Present the Add card to the unit, followed by the sequence of numbers representing the lowest transponder ID number. Then present the Thru card, followed by the sequence of numbers representing the highest transponder ID number. Then present the Enter card to the unit. For example, to add transponders #1 through #10 to the system:



Transponder number 1 through 10 are now valid.

Delete A Transponder From The System

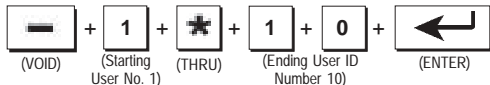
Place the unit in the Program Mode (see Page 8). Present the Void card to the reader, followed by the sequence of numbers representing the transponder ID number. Then present the Enter card to the unit. For example, to delete transponder #12, the following sequence would be presented:



Transponder #12 is now void.

Delete A Series Of Transponders From The System

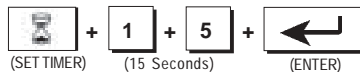
Place the unit in the Program Mode (see Page 8). Present the Void card to the unit, followed by the sequence of numbers representing the lowest transponder ID. Then present the Thru card followed by the sequence of cards representing the highest number transponder. Finally, present the Enter card. For example, to delete transponders #1 through #10:



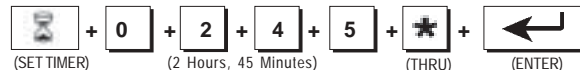
Transponders #1 through #10 are now void.

Set the Latch Timer:

Put the unit into the Program mode, if necessary (See Page 8). Present the **SET TIMER** card to the unit. Then present the sequence of program cards representing the desired Latch Time (0 - 65535 seconds) to the unit. Present the **ENTER** card. A green light and beep means that the Latch Timer setting was changed. If you set the Latch Timer for "0" seconds, the actual latch time will be approximately 0.25 seconds. For example, to set the latch timer to 15 seconds, the following sequence would be followed;



For longer latch times it may be easier to set the timer with hour:minute notation. Present the **SET TIMER** card; then present the sequence of program cards representing the number of hours (2 digits); then present the sequence of cards representing the number of minutes; then present the **THRU** card; then present the **ENTER** card. (The maximum relay time is 18 hours and 00 minutes.) For example, to set the latch timer for 2 hours and 45 minutes the following sequence would be followed:



If you have set an extended latch time, but need to interrupt it, follow this procedure. Put the unit in Program Mode (see Page 8). Then present the Set Timer Card followed by the 1 card followed by the Enter card. After the Program Mode expires, present a valid card to the reader. After one second the relay will return to it's normal state. You will then have to reprogram the latch timer to the desired duration.