

# MODEL 5510 PROGRAMMER

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**SILENT KNIGHT**  
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## OPERATION MANUAL

**SILENT KNIGHT**  
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The 5510 programmer can be used to program Xicor 2443 EEPROMs for several different models of Silent Knight equipment.

It is powered from a single 9 volt alkaline battery that will provide approximately 16 hours of continuous use. The 5510 also has an auto off feature that will turn off the programmer if no keys are depressed for 5 minutes. Figure 1 shows the general layout of the 5510 programmer.

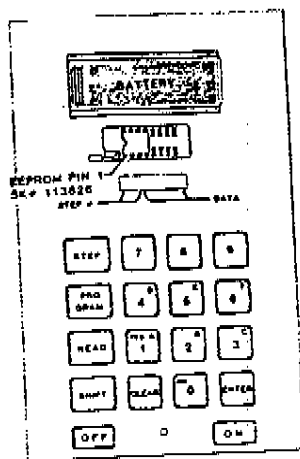


Figure 1

1

erasable PROM that can be reprogrammed many times with different data.

**PROM Socket:** The 5510 has a zero-insertion force socket for the EEPROM. The EEPROM must be inserted with the lever on the socket pointing up. Be sure the EEPROM is inserted with its notched end closest to the lever. After insertion of the EEPROM move the lever to the down position. Figure 1 shows the correct orientation for the EEPROM. Always be sure you insert the EEPROM correctly in the socket.

**DISPLAY:** The 5510 has a six digit LED display. The left two digits are used to indicate the programming step number and the right four digits are for the display of data.

**TOUCH KEYS:** Eighteen touch keys are used for data entry, reading and programming the PROMs.

**ON:** The on key will turn on the 5510 programmer. The display will show a friendly HELLO in response to pressing on.

**OFF:** The off key will turn off the 5510. All data in the programmer will be lost.

**ENTER:** The enter key enters the data in the display in the internal RAM of the 5510. The step number is also incremented and data for that step is displayed. See example below. (#= blank digit)

Display shows: 00 1501  
Press-ENTER  
Display shows: 01 data

2

Display shows:10 1501

Press-ENTER

Display shows:11 ###1

You are now ready to begin programming the 6 steps of the PROM CODING FORM for the model 1501. The object is to match the display of the 5510 to the steps completed on the PROM CODING FORM and then press ENTER to advance to the next step.

Step 1: 7 Zone Number (1-16) This transmitter was selected to activate zone 7.

Press-7

Display shows:11 ###7

Press-ENTER

Display shows:12 ###0

Step 2: 0 Response Time (1)=10ms (0)=100ms The response time was selected to be 100ms. Since 0 was the default value for step 2, just press ENTER.

Press-ENTER

Display shows:13 ###0

Step 3: 1 Contact Type (1)=N.O. (0)=N.C. The contacts to be used are N.O. type.

Press-1

Display shows:13 ###1

Press-ENTER

Display shows:14 ###0

Step 4: 1 Transmitter Type (1)=Intrusion (0)=Fire: This transmitter will be an intrusion type.

Press-1

Display shows:14 ###1

Display shows:15 ###0

Step 5: 18 ID Number (0-63) The ID number selected was 18.

Press-1

Display shows:15 ###1

Press-8

Display shows:15 ###8

Press-ENTER

Display shows:16 ###1

Step 6: 947 Resident Code (0-1023) This code is the same for all transmitters in the system. 947 was selected.

Press-9

Display shows:16 ###9

Press-4

Display shows:16 ###94

Press-7

Display shows:16 ###947

Press-ENTER

Display shows:10 1501

You have now entered all 6 steps for the model 1501 into the RAM of the 5510 and are ready to program the 2443 EEPROM. To do this put the 2443 EEPROM into the socket correctly (see figure 1). Press the PROGRAM key. When programming is complete the display will indicate PASS or FAIL. PASS indicates that the EEPROM was programmed with the same data that was entered into the 5510 RAM.

FAIL indicates that either the EEPROM was inserted incorrectly, no EEPROM was inserted, or the EEPROM is defective.

The 1501 coding which you have just seen uses two types of questions.

1) Yes/No questions - Yes=1, No=0

2) Number questions - (Do not enter numbers greater than the maximum shown on the coding form.)

Other models may use these types and some additional types, which are as follows:

3) Long numbers - Numbers with more than 4 digits (such as phone numbers) cannot be displayed as a whole. Press ENTER to scroll additional digits into the display when examining these steps. To enter a new number, just enter the digits (the programmer will remember the digits that scroll off the display) and press ENTER after the last digit.

4) 8 Yes/No questions in one step - To reduce the number of steps, eight Yes/No type questions are combined in one step. The data display will show the corresponding digit 1-8 for each sub-step answer of YES. A blank digit indicates an answer of NO. The display will alternate between 1234 and 5678. Pressing a digit will toggle the corresponding digit in the display.

Press enter when the proper combination of digits are displayed. This type of question will appear on the coding form as :

Step# 1 2 3 4 5 6 7 8 :question....

or as :

Step# .1 question....

:

:

Step# .8 question....

The 5510 can be updated to accommodate new models which use the Xicor 2443 EEPROM. If you enter a model # which is not in the programmers software, the display will show

The 5510 is updated by replacing its software chip. The revision number can be examined by entering Model #0.

This unit is revision -0002- and can program the following models:

- 1501
- 1502
- 1503
- 1504
- 1505
- 1520
- 5251
- 5252
- 2420
- 2720
- 2722
- 1420

STEP: The step key is used to jump to any step number and to display the data that is currently in the 5510 memory.

See example below.

```

Press-STEP
Display shows:10 ****
Press-0
Display shows:18 ****
Press-ENTER
Display shows:18 data
  
```

SHIFT: The shift key enables the hex characters A, B, C, D, E, and F on the key pad. When the shift key is pressed a "-" appears, indicating that the shift is activated. Pressing a digit key will then produce a hex character A-F instead of 1-6. See example below.

```

Display shows:12 4567
Press-SHIFT
Display shows:12 567-
Press-B
Display shows:12 567b
  
```

CLEAR: The clear key has three functions. It is normally used to blank the data display. See example below.

```

Display shows:12 567b
Press-CLEAR
Display shows:12 ****
  
```

When in the step mode the CLEAR key clears the step display to "0".

```

Display shows:18 ****
Press-CLEAR
Display shows:10 ****
  
```

When in the shift mode the CLEAR key restores the data display to what it was prior to pressing the shift key.

```

Display shows:12 567-
Press-CLEAR
Display shows:12 4567
  
```

READ: The read key reads data from the EEPROM and puts it into the internal RAM of the 5510. The read key is only active in step "0".

PROGRAM: The program key writes data into the EEPROM from the internal RAM of the 5510. After programming the EEPROM is automatically verified to make sure it matches the RAM of the 5510. The programming key is only active in step "0".

#### Programming Examples

Model 1501: Open the case, push the ON key.

```

Display shows:HELLO
Press-ENTER
Display shows:10 ****
  
```

You are now in step "0" and ready to start programming.

Step 0: Enter the model number of the equipment you are programming the EEPROM for. In this example it is 1501.

```

Press-1
Display shows:10 ****
Press-5
Display shows:10 ****5
Press-0
Display shows:10 1150
Press-1
  
```