

**SILENT KNIGHT**  
**MODEL 4150**  
**AUXILIARY CONTROL MODULE**  
**PROGRAMMING RECORD**  
**REVISED JULY 1989**  
**PART NUMBER 150500**

## Table of Contents

1	MODEL 4150 PROGRAMMING RECORD .....	1
1.1	SPECIAL WINDOWS .....	1
1.2	NORMAL WINDOWS .....	1
1.3	SENSOR TYPE (select one type for each input) .....	2
1.4	A/D INPUT REPORTING TYPE .....	2
1.5	INPUT TRIP LEVELS .....	2
1.6	HYSTERESIS .....	3
1.7	ACTIVATION TIME (0-255 Seconds) .....	3
1.8	RELAY ACTIVATION DAYS .....	3
1.9	ACTIVATION TYPE .....	4
1.10	RELAY CONTACT TYPE .....	4
2	PROGRAMMING RECORD FOR USE WITH THE 5520 PROGRAMMER .....	5
2.1	RELAY TIMES .....	5
2.2	RELAY DAYS .....	6
2.3	ANALOG INPUTS .....	6
2.4	DURATION TIMES .....	7

# 1 MODEL 4150 PROGRAMMING RECORD

This programming record is divided into two sections. The first section (pages 1 to 4) is the record you will use if you program the 4150 using a full function keystation. The second section (pages 5 to 7) is the record you will use if you program the 4150 using a Model 5520 programmer.

## 1.1 SPECIAL WINDOWS

Enter FF:FF if not using the option.

OPTION		ADDRESS FOR HOURS / MIN.
OPENING/ACTIVATION 1 RELAY #1	--:--	\$00 \$01
CLOSING/ACTIVATION 2 RELAY #1	--:--	\$02 \$03
OPENING/ACTIVATION 1 RELAY #2	--:--	\$04 \$05
CLOSING/ACTIVATION 2 RELAY #2	--:--	\$06 \$07
OPENING/ACTIVATION 1 RELAY #3	--:--	\$08 \$09
CLOSING/ACTIVATION 2 RELAY #3	--:--	\$0A \$0B
OPENING/ACTIVATION 1 RELAY #4	--:--	\$0C \$0D
CLOSING/ACTIVATION 2 RELAY #4	--:--	\$0E \$0F
OPENING/ACTIVATION 1 RELAY #5	--:--	\$10 \$11
CLOSING/ACTIVATION 2 RELAY #5	--:--	\$12 \$13
OPENING/ACTIVATION 1 RELAY #6	--:--	\$14 \$15
CLOSING/ACTIVATION 2 RELAY #6	--:--	\$16 \$17
OPENING/ACTIVATION 1 RELAY #7	--:--	\$18 \$19
CLOSING/ACTIVATION 2 RELAY #7	--:--	\$1A \$1B
OPENING/ACTIVATION 1 RELAY #8	--:--	\$1C \$1D
CLOSING/ACTIVATION 2 RELAY #8	--:--	\$1E \$1F

## 1.2 NORMAL WINDOWS

Enter FF:FF if not using the option.

OPENING/ACTIVATION 1 RELAY #1	--:--	\$20 \$21
CLOSING/ACTIVATION 2 RELAY #1	--:--	\$22 \$23
OPENING/ACTIVATION 1 RELAY #2	--:--	\$24 \$25
CLOSING/ACTIVATION 2 RELAY #2	--:--	\$26 \$27
OPENING/ACTIVATION 1 RELAY #3	--:--	\$28 \$29
CLOSING/ACTIVATION 2 RELAY #3	--:--	\$2A \$2B

OPTION	ADDRESS FOR HOURS / MIN.		
OPENING/ACTIVATION 1 RELAY #4	--:--	\$2C	\$2D
CLOSING/ACTIVATION 2 RELAY #4	--:--	\$2E	\$2F
OPENING/ACTIVATION 1 RELAY #5	--:--	\$30	\$31
CLOSING/ACTIVATION 2 RELAY #5	--:--	\$32	\$33
OPENING/ACTIVATION 1 RELAY #6	--:--	\$34	\$35
CLOSING/ACTIVATION 2 RELAY #6	--:--	\$36	\$37
OPENING/ACTIVATION 1 RELAY #7	--:--	\$38	\$39
CLOSING/ACTIVATION 2 RELAY #7	--:--	\$3A	\$3B
OPENING/ACTIVATION 1 RELAY #8	--:--	\$3C	\$3D
CLOSING/ACTIVATION 2 RELAY #8	--:--	\$3E	\$3F

**1.3 SENSOR TYPE (select one type for each input)**

	TEMP	AIR FLOW	HUMIDITY	FLUID LEVEL	DISABLE	
INPUT #1	01	02	03	04	FF	ADDRESS \$40
INPUT #2	01	02	03	04	FF	ADDRESS \$41
INPUT #3	01	02	03	04	FF	ADDRESS \$42
INPUT #4	01	02	03	04	FF	ADDRESS \$43

**1.4 A/D INPUT REPORTING TYPE**

	ADDRESS	
INPUT #1-4	\$44 _ _ _ _	REPORT
	\$45 _ _ _ _	O/C RELAY

**1.5 INPUT TRIP LEVELS**

TEMPERATURE 0 TO 250 DEGREES FAHRENHEIT  
 FLUID LEVEL 0 TO 120 INCHES OF WATER  
 HUMIDITY 10 TO 90 % RELATIVE HUMIDITY

**AIR FLOW DATA**

LOW HIGH

000 089 = REPORT PRESENCE OF AIR FLOW  
078 000 = REPORT NO AIR FLOW CONDITION  
078 089 = REPORT BOTH

		LOW	HIGH	ADDRESS	LOW	HIGH
INPUT #1	FROM	---	TO ---		\$46	\$47
INPUT #2	FROM	---	TO ---		\$48	\$49
INPUT #3	FROM	---	TO ---		\$4A	\$4B
INPUT #4	FROM	---	TO ---		\$4C	\$4D

**1.6 HYSTERESIS**

INPUT #1	---	ADDRESS	\$4E
INPUT #2	---		\$4F
INPUT #3	---		\$50
INPUT #4	---		\$51

**1.7 ACTIVATION TIME (0-255 Seconds)**

Entering an Activation Time of 0 seconds selects the Continuous Activation Mode.

RELAY #1	---	SECONDS	ADDRESS	\$52
RELAY #2	---	SECONDS		\$53
RELAY #3	---	SECONDS		\$54
RELAY #4	---	SECONDS		\$55
RELAY #5	---	SECONDS		\$56
RELAY #6	---	SECONDS		\$57
RELAY #7	---	SECONDS		\$58
RELAY #8	---	SECONDS		\$59

**1.8 RELAY ACTIVATION DAYS**

When selecting the Normal and Special time windows, enter the number of the day that you wish to use the "SPECIAL" windows. Days that are not selected will use the "NORMAL" windows.

	S	M	T	W	T	F	S	ADDRESS
NORMAL DAYS FOR RELAY #1	0	1	2	3	4	5	6	\$5A
SPECIAL DAYS FOR RELAY #1	0	1	2	3	4	5	6	\$5B
NORMAL DAYS FOR RELAY #2	0	1	2	3	4	5	6	\$5C
SPECIAL DAYS FOR RELAY #2	0	1	2	3	4	5	6	\$5D
NORMAL DAYS FOR RELAY #3	0	1	2	3	4	5	6	\$5E
SPECIAL DAYS FOR RELAY #3	0	1	2	3	4	5	6	\$5F
NORMAL DAYS FOR RELAY #4	0	1	2	3	4	5	6	\$60
SPECIAL DAYS FOR RELAY #4	0	1	2	3	4	5	6	\$61
NORMAL DAYS FOR RELAY #5	0	1	2	3	4	5	6	\$62
SPECIAL DAYS FOR RELAY #5	0	1	2	3	4	5	6	\$63
NORMAL DAYS FOR RELAY #6	0	1	2	3	4	5	6	\$64
SPECIAL DAYS FOR RELAY #6	0	1	2	3	4	5	6	\$65
NORMAL DAYS FOR RELAY #7	0	1	2	3	4	5	6	\$66
SPECIAL DAYS FOR RELAY #7	0	1	2	3	4	5	6	\$67
NORMAL DAYS FOR RELAY #8	0	1	2	3	4	5	6	\$68
SPECIAL DAYS FOR RELAY #8	0	1	2	3	4	5	6	\$69

**1.9 ACTIVATION TYPE**

In this section, you are selecting whether the relays can be activated automatically, manually or both.

1. To select AUTOMATIC ONLY, enter the relay # in location \$6A only.
2. To select both AUTOMATIC and MANUAL, enter the relay # in locations \$6A and \$6B.
3. To select MANUAL ONLY, enter the relay # in location \$6B only.

**1.10 RELAY CONTACT TYPE**

To select Normally Closed contacts, enter the relay # in address \$6C. Do Not enter the relay # if you want the contacts to be Normally Open. Normally Open contacts are open when the door is open. Normally Closed contacts are closed when the door is open.

RELAY #1	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #2	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #3	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #4	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #5	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #6	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #7	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_
RELAY #8	N.O.	N.C.	\$6C	_	_	_	_	_	_	_	_

## 2 PROGRAMMING RECORD FOR USE WITH THE 5520 PROGRAMMER

### 2.1 RELAY TIMES

Enter FF:FF if you do not wish to have a relay activate on any given day.

SPEC RELAY #1 OPEN AT	_ _: _ _	SPEC RELAY #1 CLOSE AT	_ _: _ _
SPEC RELAY #2 OPEN AT	_ _: _ _	SPEC RELAY #2 CLOSE AT	_ _: _ _
SPEC RELAY #3 OPEN AT	_ _: _ _	SPEC RELAY #3 CLOSE AT	_ _: _ _
SPEC RELAY #4 OPEN AT	_ _: _ _	SPEC RELAY #4 CLOSE AT	_ _: _ _
SPEC RELAY #5 OPEN AT	_ _: _ _	SPEC RELAY #5 CLOSE AT	_ _: _ _
SPEC RELAY #6 OPEN AT	_ _: _ _	SPEC RELAY #6 CLOSE AT	_ _: _ _
SPEC RELAY #7 OPEN AT	_ _: _ _	SPEC RELAY #7 CLOSE AT	_ _: _ _
SPEC RELAY #8 OPEN AT	_ _: _ _	SPEC RELAY #8 CLOSE AT	_ _: _ _
NORM RELAY #1 OPEN AT	_ _: _ _	NORM RELAY #1 CLOSE AT	_ _: _ _
NORM RELAY #2 OPEN AT	_ _: _ _	NORM RELAY #2 CLOSE AT	_ _: _ _
NORM RELAY #3 OPEN AT	_ _: _ _	NORM RELAY #3 CLOSE AT	_ _: _ _
NORM RELAY #4 OPEN AT	_ _: _ _	NORM RELAY #4 CLOSE AT	_ _: _ _
NORM RELAY #5 OPEN AT	_ _: _ _	NORM RELAY #5 CLOSE AT	_ _: _ _
NORM RELAY #6 OPEN AT	_ _: _ _	NORM RELAY #6 CLOSE AT	_ _: _ _
NORM RELAY #7 OPEN AT	_ _: _ _	NORM RELAY #7 CLOSE AT	_ _: _ _
NORM RELAY #8 OPEN AT	_ _: _ _	NORM RELAY #8 CLOSE AT	_ _: _ _

## 2.2 RELAY DAYS

NORMAL DAYS #1	S	M	T	W	T	F	S	SPECIAL DAYS #1	S	M	T	W	T	F	S
NORMAL DAYS #2	S	M	T	W	T	F	S	SPECIAL DAYS #2	S	M	T	W	T	F	S
NORMAL DAYS #3	S	M	T	W	T	F	S	SPECIAL DAYS #3	S	M	T	W	T	F	S
NORMAL DAYS #4	S	M	T	W	T	F	S	SPECIAL DAYS #4	S	M	T	W	T	F	S
NORMAL DAYS #5	S	M	T	W	T	F	S	SPECIAL DAYS #5	S	M	T	W	T	F	S
NORMAL DAYS #6	S	M	T	W	T	F	S	SPECIAL DAYS #6	S	M	T	W	T	F	S
NORMAL DAYS #7	S	M	T	W	T	F	S	SPECIAL DAYS #7	S	M	T	W	T	F	S
NORMAL DAYS #8	S	M	T	W	T	F	S	SPECIAL DAYS #8	S	M	T	W	T	F	S

## 2.3 ANALOG INPUTS

SENSOR TYPE #1	NOT USED	TEMP	AIR FLOW	HUMIDITY	FLUID LEVEL
SENSOR TYPE #2	NOT USED	TEMP	AIR FLOW	HUMIDITY	FLUID LEVEL
SENSOR TYPE #3	NOT USED	TEMP	AIR FLOW	HUMIDITY	FLUID LEVEL
SENSOR TYPE #4	NOT USED	TEMP	AIR FLOW	HUMIDITY	FLUID LEVEL

REPORT INPUT	1	2	3	4
LINK-INP-RELAY	1	2	3	4

	LOW	HIGH
--	-----	------

INPUT TRIP #1	---	---
INPUT TRIP #2	---	---
INPUT TRIP #3	---	---
INPUT TRIP #4	---	---
HYSTERESIS #1	---	---
HYSTERESIS #2	---	---
HYSTERESIS #3	---	---
HYSTERESIS #4	---	---



## 2.4 RELAY MISC

Enter a Duration time of "0" for continuous activation

DURATION #1	- - -	SECONDS
DURATION #2	- - -	SECONDS
DURATION #3	- - -	SECONDS
DURATION #4	- - -	SECONDS
DURATION #5	- - -	SECONDS
DURATION #6	- - -	SECONDS
DURATION #7	- - -	SECONDS
DURATION #8	- - -	SECONDS
AUTOMATIC	1 2 3 4 5 6 7 8	
MANUAL	1 2 3 4 5 6 7 8	
N.C. CONTACTS	1 2 3 4 5 6 7 8	

## Index

a/d, 2  
activation, 1  
activation time, 3  
activation type, 4  
air flow, 2,6  
air flow data, 3  
analog inputs, 6  
  
closing, 1  
  
disable, 2  
duration times, 7  
  
fluid level, 2,6  
  
humidity, 2,6  
hysterisis, 3  
  
input, 2  
input reporting type, 2  
input trip levels, 2  
  
manual, 7  
  
normal windows, 1  
normally closed (N.C.) contacts, 4,7  
normally open (N.C.) contacts, 4  
  
opening, 1  
  
programming, 1  
programming record, 5  
  
relay, 1  
relay activation, 3  
relay contact type, 4  
relay days, 6  
relay times, 5  
  
sensor type, 2,6  
special windows, 1  
  
temp, 2  
temp sensor, 6  
  
windows, 1