

Supplement to MS-9600 Manual, Rev A
Smoke Detector Capacity
Detector Sensitivity & Synchronized Strobes
Positive Alarm Sequence & Printer Supervision

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This Supplement has been created to inform installers about the new Signal Line Circuit (SLC) capacity of 159 detectors and 159 modules per SLC loop; and Introduce two new FACP software features which (1) provide a synchronized strobe programming option, (2) allow the control panel to monitor and printout the sensitivity and drift compensation for each addressable smoke detector connected to the system; as well as to Provide information concerning 'Positive Alarm Sequence' and 'Printer Supervision'.

I. Synchronized Strobes

NAC Option for Synchronization

Synchronization is a panel feature that controls the activation of notification appliances in such a way that all devices will turn on and off at exactly the same time. This is particularly critical when activating strobes which must be synchronized to conform with a variety of regulations as well as to avoid random activation which could cause a hazardous condition. The FACP can be programmed to operate with a variety of manufacturer's devices.

Important: *When a Notification Appliance Circuit with a mix of audible and visual devices is programmed for silenceable and the synchronization feature is selected, only the audible devices will be turned off if the Silence key is pressed. The visual devices (strobes, etc.) will continue to operate.*

Program Selection for Synchronized Strobes

1. Press the *Enter* or *Mode* key to display the following LCD readout:

```
1=READ STATUS
2=PROGRAMMING
```

2. Press 2 to display the following:

```
PROGRAMMING
ENTER PASSWORD
*****
```

3. Enter the Master level password (default is 00000) to display the following:

```
PROGRAMMING
1=POINT PROGRAM
2=ZONE SETUP
3=LOOP SETUP
```

4. Press *down arrow* key once to display the following:

```
PROGRAMMING
1=SYSTEM SETUP
2=AUTOPROGRAM
3=VERIFY LOOP
```

5. Press *I* to display the following:

```
SYSTEM SETUP
1=TROUBLE REM OFF
2=BANNER
3=TIME-DATE
```

6. Press *down arrow* key once to display the following:

```
SYSTEM SETUP
1=TIMERS
2=NAC
3=RELAYS
```

7. Press 2 to display the following:

```
NACS
1=NAC 1
2=NAC 2
```

8. Press *I* to program NAC 1 or press 2 to program NAC 2. The following will be displayed (the # symbol will be replaced by 1 or 2):

```
NAC #
1=ENABLED YES
2=TYPE
3=SILENCEABLE
```

9. Press 2 to display the following:

```
NAC TYPE
1=BELL
2=HORN
3=STROBE
```

10. Press *down arrow* key once to display the following:

```
NAC TYPE
1=SYNCED STROBE
2=AUDIBLE
3=SIREN CIRCUIT
```

11. Press *I* to program the NAC as a synchronized strobe circuit. The display will return to the following:

```
NAC #
1=ENABLED YES
2=TYPE
3=SILENCEABLE
```

12. Press the *down arrow* key three time to display the following:

```
NAC #
1=SYNC TYPE
```

13. Press *I* to display the following:

```
NAC SYNC TYPE
1=SYSTEM SENSOR
2=WHEELOCK
3=GENTEX
```

14. Select the type of synchronized circuit according to the manufacturer's devices installed on the NAC by pressing the corresponding number key. Continue with the programming of the second NAC if desired.
When all programming is completed, repeatedly press the *ESC* (Escape) key to store the program information and exit Programming mode.

II. Addressable Smoke Detector Sensitivity

Software Enhancement

The FACP software has been enhanced to include a feature which allows the control panel to monitor the sensitivity of each addressable smoke detector in the system. This eliminates the need for a service person to physically connect a sensitivity test meter to each device in the field.

Detector Data

An addressable smoke detector's ability to detect smoke can change over time as a result of component deterioration due to environmental contaminants and dirt. Each addressable smoke detector's data (sensitivity) can be printed by entering Read Status mode.

1. Pressing the *Enter* or *Mode* key on the control panel keypad will display the following LCD screen:

```
1=READ STATUS
2=PROGRAMMING
```

2. Press *1* to display the following:

```
READ STATUS
1=SYSTEM POINT
2=ZONES
3=POWER
```

3. Press *down arrow* key four times to display the following:

```
READ STATUS
1=FUTURE USE
2=PRINTER/PC
3=PRINT
```

4. Press *3* to display the following:

```
PRINT
1=HISTORY
2=WALKTEST LOG
3=DETECTOR DATA
```

5. Press *3* to print the detector sensitivity data for all addressable smoke detectors installed on the system.

Refer to the sample printout on the following page for information on interpreting the data.

Note: If a printer is not available, it is possible to use the HyperTerminal feature found in the Windows® program Accessories folder which is resident on most personal computers. Any settings which are configured in this feature must reflect the printer settings detailed in the FACP manual. Refer to the Windows® manual for information on the HyperTerminal feature.

A printout, similar to the following example, will be generated if an optional printer is connected to the FACP.

DEVICE#	DEVICE TYPE	%DRIFT COMP.	CHAMBER	TIME/DATE
1D001	SMOKE (PHOTO)	20	1478	12:01AM 01-08-2001
1D002	SMOKE (PHOTO)	20	1362	12:01AM 01-08-2001
1D003	SMOKE (PHOTO)	21	1452	12:01AM 01-08-2001
1D004	SMOKE (PHOTO)	20	1350	12:01AM 01-08-2001
1D005	SMOKE (PHOTO)	21	1245	12:01AM 01-08-2001
1D006	SMOKE (PHOTO)	21	1247	12:01AM 01-08-2001
1D007	SMOKE (PHOTO)	21	1250	12:01AM 01-08-2001

Chamber Value

The Chamber Reading should be within the indicated ranges for the following smoke detectors:

- SD350(T), D350P(R) and SD300(T) Addressable Photoelectric Smoke Detectors: **405 - 2100** (obscuration of 1.00%/ft. to 3.66%/ft.)
- CP350 and CP300 Addressable Ionization Smoke Detectors: **750 - 2100** (obscuration of 0.50%/ft. to 1.44%/ft.)

If the addressable smoke detector's Chamber reading is not within this acceptable range, clean the detector and check the Chamber reading again. If the reading is still not within the acceptable range, immediately replace the detector.

Refer to the Fire Alarm Control Panel manual's Programming section for additional information on accessing Read Status mode and interpreting the smoke detector addresses.

Drift Compensation

Drift compensation uses software algorithms that identify and compensate for long-term changes in the data readings from each addressable smoke detector. These long-term changes in detector data readings are typically caused by dirt and dust accumulation inside the smoke chamber. Drift compensation performs the following functions:

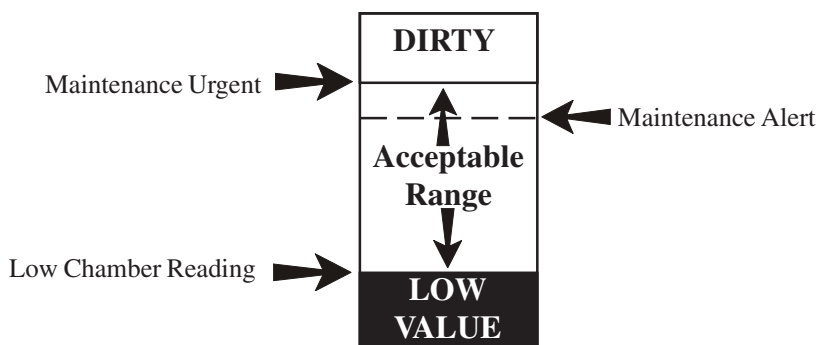
- Allows a smoke detector to retain its original ability to detect actual smoke and resist false alarms, even as dirt and dust accumulate
- Reduces maintenance requirements by allowing the control panel to automatically perform the periodic sensitivity measurements required by NFPA Standard 72

The FACP software also provides filters to remove transient noise signals, usually caused by electrical interference.

Maintenance Alert

The software determines when drift compensation for a detector reaches an unacceptable level that can compromise detector performance. When a detector reaches an unacceptable level, the control panel indicates a maintenance alert. The following table summarizes the three levels of maintenance alert:

Maintenance Level	FACP Status Displays	Indicates
Low Chamber Value	INVREP	A hardware problem in the detector
Maintenance Alert	DIRTY1	Dust accumulation that is near but below the allowed limit. The Maintenance Alert level indicates the need for maintenance before the performance of the detector is compromised
Maintenance Urgent	DIRTY2	Dust accumulation above the allowed limit



The following information is provided as a clarification to the 9600 Fire Alarm Control Panel manual.

1. PAS (Positive Alarm Sequence) programming feature. Refer to the 9600 manual page 47 and page 114 for information on this option.

The PAS option is not available in the initial release of the 9600 software. *Do not attempt to use this feature since it is not yet functional in this product.* Information on the availability of this feature will be made known on the manufacturer's internet site along with details on how to upgrade existing software.

2. Printer Supervision. Refer to the 9600 manual page 92 for information on this option.

Printer supervision, when enabled, will typically detect the removal of the printer cable and will detect when the printer power has been turned off. Depending upon the brand of printer, other errors such as paper empty or printer off-line may be detected.