



Harnett
COUNTY
NORTH CAROLINA



Emergency Services Department

www.harnett.org

Fire Marshal Division

P.O. Box 370
Lillington, NC 27546
910-893-7580

SCANNED
1/31/11
DATE

Application for Plan Review

Application # 07 - 500 - 16983

Date Received: 1/31/2011 Received By: RO

Name of Project: Little Miracles Child Care

Physical Address of Project: Lot # 37 Babcock Village
Spring Lake NC

Plans Submitted By: Margaret Mosley

Project Phone: (910) - 528 - 1727

Contact Person/Address: Margaret Mosley
P.O. Box 10911 Vass NC 28394

Contact Phone: (910) - 528 - 1727 (910) - 245 - 4942

Contractor's Name/Info: _____

Contractor's Phone: (____) - ____ - ____

- Plans that are submitted will be reviewed as quickly as possible with an average time of review between 7-10 working days.
- Status checks may be conducted on plan reviews by visiting the website <http://htweb.harnett.org/Click2GovBP/Index.jsp> or by calling the Harnett County Central Permitting Office (910-893-7525) ext 2), or the Harnett County Fire Marshal's Office (910-893-7580).
- Approved plans must be picked up from the Central Permitting Office and all fees paid before any required inspections can be conducted.



Plan Review, Inspection and Permit Fees

Application Number 07-50016983

\$150.00	<input type="checkbox"/>	Explosive Mat. (90 Days)
\$ 75.00	<input type="checkbox"/>	Explosive Mat. (72 Hrs)
\$ 25.00	<input type="checkbox"/>	Fireworks Public Display
\$ 35.00	<input type="checkbox"/>	Final Inspection
\$ 35.00 +2.00 per device	<input type="checkbox"/>	Fire Alarm Testing
\$ 35.00 + 2.00 per nozzle	<input type="checkbox"/>	Fixed Fire Suppression
\$ 25.00	<input type="checkbox"/>	Insecticide Fog/Fumigation
\$ 50.00	<input type="checkbox"/>	Pipe Test/UST/AGST
\$ 50.00	<input type="checkbox"/>	Plans up to 5000 ft ²
\$100.00	<input type="checkbox"/>	Plans 5001 ft ² to 10,000 ft ²
\$150.00	<input type="checkbox"/>	Plans 10,001 ft ² to 25,000 ft ²
\$250.00	<input type="checkbox"/>	Plans 25,001 ft ² and over
\$ 35.00 + 2.00 per Head	<input type="checkbox"/>	Sprinkler Certification Test
\$ 35.00	<input type="checkbox"/>	Standpipe Testing
\$ 25.00	<input type="checkbox"/>	Special Assembly
\$ 25.00	<input type="checkbox"/>	Temporary Kiosks/Displays
\$ 25.00	<input type="checkbox"/>	Tents, Canopies, Air Supported
\$ 50.00	<input type="checkbox"/>	Tank Installation (charge for each tank)
\$ 50.00	<input type="checkbox"/>	Tank Removal (charge for each tank)

\$ No Charge Total

n/a Total device/heads

Michael L. Martin
Code Enforcement Official

2/09/11
Date



February 9, 2011

Alphonso Mosley
P.O. Box 1091
Vass, NC 28394

Little Miracles Day Care
Hwy 87
Sanford, NC 27330

Application Number 07-50016983

Mr. Mosley,

Thank you for submitting the plans for Little Miracles Daycare. The plans have been carefully reviewed by a qualified code enforcement official to examine for full compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the new facility can be given. These items are outlined and described below.

- **906.1 Fire Extinguishers**

- Fire extinguishers shall be placed in approved locations as drawn by the code enforcement official on the approved plans.
- The fire extinguishers provided shall have a minimum rating of 2A 5B: C and shall not be installed higher than 5 feet above the finished floor.

- **506.1 Knox Box**

- A secure key box shall be installed on the new building that houses all keys to all the doors within the building in which the fire department would need access to in the event of an emergency.
- Knox Box ID stickers shall be placed on all exterior doors in which entry to the building may be gained.
- The box shall be mounted not to exceed 48 – 60 inches in height.
- An authorized order form is included with this letter.



- **404.2 Fire Safety and Evacuation Plans**
 - An approved fire safety and evacuation plans shall be prepared and maintained fro Group E occupancies.
- **505.1 Physical Address**
 - The physical address of the building shall be posted in a conspicuous place so that it can be seen on approach from the road, access road, and/or parking lot.
 - The numbers used to make up the physical address shall be at least 5 inches in height.
- **907.1.1 Fire Alarm Construction documents**
 - Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation. Construction documents shall include, but not be limited to, all of the following:
 - A floor plan.
 - Locations of alarm-initiating and notification appliances.
 - Alarm control and trouble signaling equipment.
 - Annunciation.
 - Power connection.
 - Battery calculations.
 - Conductor type and sizes.
 - Voltage drop calculations.
 - Manufacturers, model numbers and listing information for equipment, devices and materials.
 - Details of ceiling height and construction.
 - The interface of fire safety control functions.
- **1006.3 Illumination emergency power**
 - The power supply for means of egress illumination shall normally be provided by the premise's electrical supply.
 - In the event of power supply failure, an emergency system shall automatically illuminate all of the following areas:
 - Exit access corridors, passageways, and aisles in rooms and spaces which require two or more means of egress.
 - Exit access corridors and exit stairways located in buildings required to have two or more exits.
 - Interior exit discharge elements, as permitted in Section 1006.1, in buildings required to have two or more exits.
 - The portion of the exterior exit discharge immediately adjacent to exit discharge doorways in buildings required to have two or more exits.



- **703.1 Maintenance of Fire Assemblies**
 - The required fire-resistance rating of fire-resistance-rated construction (including walls, fire stops, shaft enclosures, partitions and floors) shall be maintained. Such elements shall be properly repaired, restored or replaced when damaged, altered, breached or penetrated. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings, and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly
 - Future penetrations to be sealed with some type of removable fire stop

- **503.1.1 Buildings and facilities.**
 - Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

- **Update to Current Edition of Code**
 - Plans that were submitted in 2007 shall be updated to reflect compliance with the 2009 edition of all applicable codes.

Thank you again for submitting the plans for the Little Miracles Daycare. Please review the plans and adhere to any notes and alterations that were made in addition to the original drawings. These remarks are for the plans that were submitted and its original intent. These remarks do not apply if the original intent changes or what was submitted on the above date changes. If you have any questions, please do not hesitate to call this office

Again, thank you and we look forward to working with you during the construction period!

Sincerely,

Michael L. Martin
Deputy Fire Marshal

4/14/11
DATE



Emergency Services Department

www.harnett.org

Fire Marshal Division

P.O. Box 370
Lillington, NC 27546
910-893-7580

Application for Plan Review

Application # 01-500-16983

Date Received: 4/14/11

Received By: PO

Name of Project: Little Miracles #3 Day Care

Physical Address of Project: Badcock Village Hwy 87
NC

Plans Submitted By: Curtiss Shirley

Project Phone: (910)-229-5690

Contact Person/Address: CURTISS SHIRLEY

Contact Phone: (910)-229-5690 ()- -

Contractor's Name/Info: All American Alarms

PO Box 599 Parkton, NC 28371

Contractor's Phone: (910)-888-3199

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- Status checks may be conducted on plan reviews by visiting the website <http://htweb.harnett.org/Click2GovBP/Index.jsp> or by calling the Harnett County Central Permitting Office (910-893-4759), or the Harnett County Fire Marshal's Office (910-893-7580).
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ES PRESCHOOL

VILLE, NC

RM LAYOUT

ITTEMIRACLES

1298

DATE: 2/26/07

SCALE: 1/8" = 1'-0"

PLOT SCALE: 1:1

DRAWN BY: YD

CHECKED BY:

No.

DESCRIPTION

BY

DATE

LAZENBY & A

CONSULTING E

2000 N. 7th

WEST MONROE, LO

PHONE: 318-2

COMARK

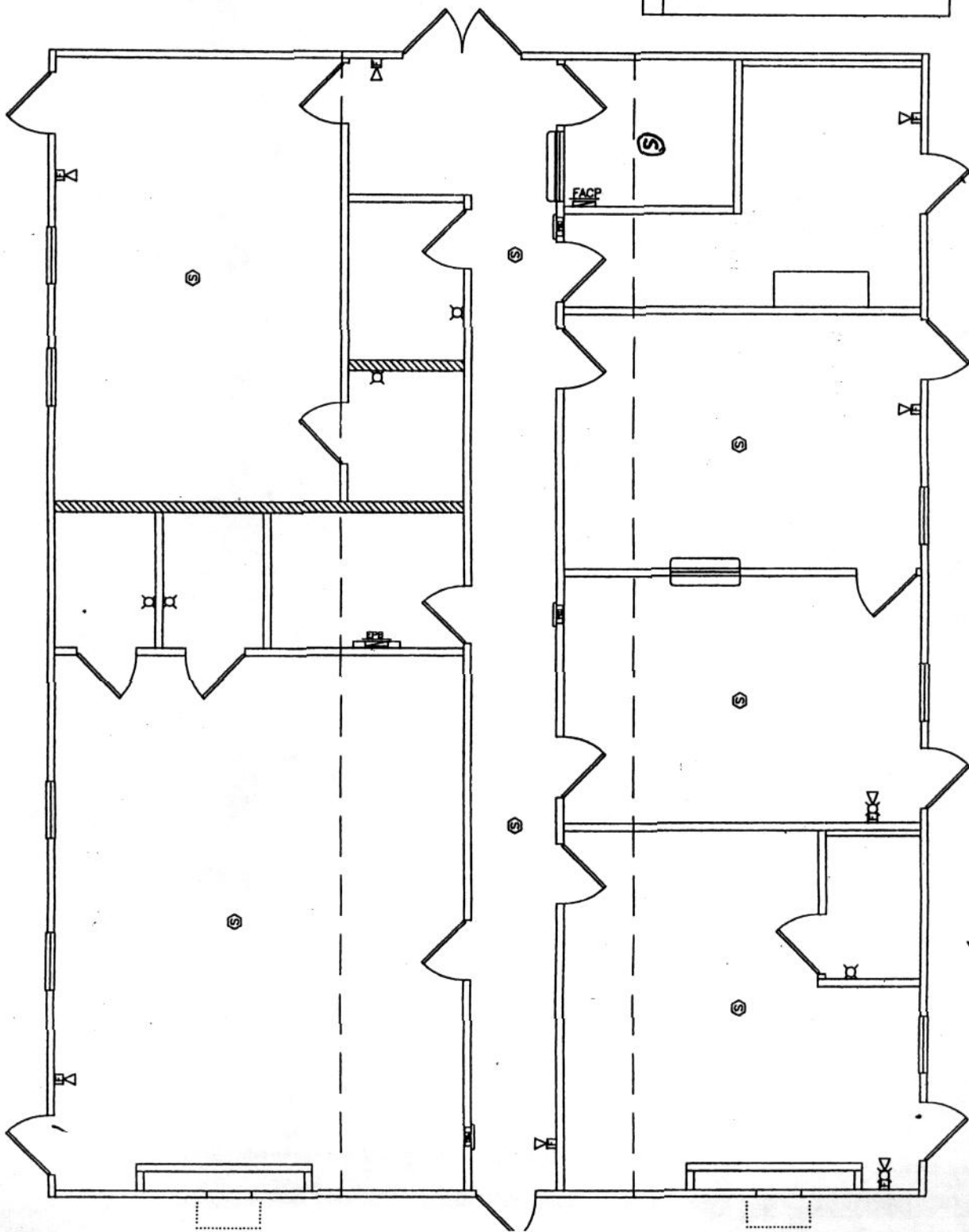
BUILDING SYSTEMS, INC.

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505 N. BECKLEY AVE.

PEMBROKE, NORTH CAROLINA 28372



- NOTES:
1. BUILDING IS: 240V, SINGLE PHASE, 3 WIRE
 2. ELECTRICAL CONDUIT: ENT
 3. ELECTRICAL WIRING: MIN. #12 THHN COPPER WITH GROUND
 4. GROUNDING ON SITE: PER 2005 NCEC ARTICLE 250-50
 5. INSTALL RECEPTS AT 18" AFF.
 6. BOX & CONDUIT FOR VOICE/DATA IS 3/4" ENT STUBBED IN.
 7. FACP SHALL BE INSTALLED AS 4x4 BOX AT 80" AFF WITH (2) 3/4" CONDUIT UP & (1) 3/4" DOWN.

SYMBOL LEGEND	
EXIT	LIGHTED EXIT SIGN
W/	BATTERY BACK-UP
EL	EMERGENCY LIGHT
W/	BATTERY BACK-UP
P	ALARM PULL STATION
AT 48" A.F.F.	
S	SMOKE DETECTOR
H	ALARM HORN/STROBE
AT 80" A.F.F.	
V	ALARM STROBE
AT 80" A.F.F.	
H	ALARM HORN
AT 80" A.F.F.	
FACP	FIRE ALARM
PANEL	CONTROL PANEL



Honeywell Security

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- ☐ Apply UL Power Limits?
(Required to maintain UL Listing)
- ☒ Commercial Fire Installation
- ☐ Commercial Burg Installation

Facility Information

Location:	Little Miracles Daycare
Account #:	
Model:	Vista 32 FB
Engineer:	Curtiss Shirley
Date:	12-Apr-11

Enter Standby and Alarm Times

Battery Standby (hours): **24**

Alarm Duration (minutes): **5**

Delivery
Contingency
Factor

10% ▼

Recommended
Battery (AH) **10.0**

Recommended Battery Capacity OK for 48-Hr Recharge

SELECTED PANEL MAXIMUM OUTPUT RATINGS

Select Panel from pulldown list:	Polling Loop (mA)	Standby Auxiliary Power (mA)	Alarm Auxiliary Power (mA)	Panel Standby (mA)	Panel Alarm (mA)	Bell #1 Output (mA)	Bell #2 Output (if used; mA)	Maximum Panel Standby Output	Maximum Panel Alarm Output	Max Battery Supported by Panel
Vista-32FB ▼	128	750	1000	300	470	1700	1700	1300	2800	34.4
Calculated Current Draw	0	50	165	Calculated Bell Draw		828	933	50	1926	
Power Budget	128.0	700.0	835.0	Bell Power Budget		872.0	767.0	1250.0	874.0	
<input type="checkbox"/> Remove Unused Devices From List	Current OK	Current OK	Current OK	External Bell Power Req'd (mA):		Current	0.0	Current OK	Current OK	0.0
								Ext. UL Power Req'd (mA):		0.0

Grayed-out device(s) are not supported by selected panel

KEYPADS/INTERFACES	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
6128	0	0	30	45		0	0	0	0
6128RF	0	0	30	45		0	0	0	0
6137	0	0	40	60		0	0	0	0
6139/6139R	0	0	40	100		0	0	0	0
6148	0	0	30	55		0	0	0	0
6150	0	0	40	70		0	0	0	0
6150RF	0	0	40	70		0	0	0	0
6150V	0	0	40	70		0	0	0	0
6160/6160CR	1	0	45	150		45	150	0	0
6160RF	0	0	50	150		0	0	0	0
6160V	0	0	60	190		0	0	0	0
6270	0	0	180	280		0	0	0	0
62710	0	0	180	230		0	0	0	0
62710V	0	0	180	230		0	0	0	0
6271V	0	0	137	210		0	0	0	0
6132 (Symphony)	0	0	350	400		0	0	0	0
FSA-8 Fire Zone Annunciator	0	0	35	65		0	0	0	0
FSA-24 Fire Zone Annunciator	0	0	35	130		0	0	0	0
Add'l Keypd (Enter # and Currents)	0	0	0	0		0	0	0	0
Add'l Keypd (Enter # and Currents)	0	0	0	0		0	0	0	0

Power Overdraw if highlighted

Panel Max Output Exceeded if highlighted


2 WIRE & 4 WIRE SMOKE DETECTORS (except Vplex Polling Loop detectors)	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
2 wire smoke detector (zone powered)	9		Two-wire smoke detector current is built into the panel budgets. These fields are included to help you create a complete equipment list. The line below indicates if number of detectors exceeds panel capacity, or if the selected panel does not support 2-wire smoke detectors.						
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0								
12V 4 Wire Smoke (Qty & Currents)	0	0	0	0		0	0	0	0
12V 4 wire Smoke (Qty & Currents)	0	0	0	0		0	0	0	0
12V 4 wire Smoke (Qty & Currents)	0	0	0	0		0	0	0	0
12V 4 wire Smoke (Qty & Currents)	0	0	0	0		0	0	0	0

Quantity of 2 Wire Smoke Detectors OK for selected panel!

MULTI-POWER DEVICES	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
4208U [powered by polling loop]	0	0	0	0		0	0	0	0
4208U [powered by panel aux power]	0	0	0	0		0	0	0	0
4208U [powered externally]	0	0	0	0		0	0	0	0
4208SN [powered by polling loop]	0	0	0	0		0	0	0	0
4208SN [powered by panel aux power]	0	0	0	0		0	0	0	0
4208SN [powered externally]	0	0	0	0		0	0	0	0
4208SNF [powered by polling loop]	0	0	0	0		0	0	0	0
4208SNF [powered by panel aux power]	0	0	0	0		0	0	0	0
4208SNF [powered externally]	0	0	0	0		0	0	0	0
4208SNF (Class B to A Zone Converter)	0	0	40	0	0	0	0	0	0
4209U Grouped Zone Mux. Module	0	0	0	0		0	0	0	0
4209U [powered externally]	0	0	0	0		0	0	0	0
4297 Polling Loop Extender	0	0	0	0		0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0	0	0

Power Overdraw if highlighted

Panel Max Output Exceeded if highlighted

 AUXILIARY POWERED DEVICES	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
PS24 24 volt Power Supply Module	0	0	50	100			0	0	0
4100SM (no more than one per system)	0	0	25	0			0	0	0
4204: Enter no. of relays used	0	0	40	0			0	0	0
4204CF: Enter no. of relays used	0	0	80				0	0	0
4285 Voice Module	0	0	160				0	0	0
4286 with warning speakers	0	0	220	300			0	0	0
5140DLM Backup Dialer Module	1	0	5	15			5	15	0
5800RP wireless repeater module	0	0	100				0	0	0
5800TM wireless xmtr module	0	0	20				0	0	0
5881EN receiver	0	0	60				0	0	0
5883 hi-security receiver	0	0	80				0	0	0
UVS-QM	0	0	75	110			0	0	0
VA8200 Panel Linking Module	0	0	88	0			0	0	0
VA8201 Alpha Pager Module	0	0	165	0			0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0			0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0			0	0	0
Communicators									
7845GSM/7845i-GSM	0	0	10				0	0	0
7845i/7845i-ENT	0	0	110				0	0	0
GSMCF/iGSMCF Fire Communicator	0	0	10				0	0	0
7847i/7847i-E Internet Communicator	0	0	75				0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0			0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0			0	0	0
PIR Motion Detectors									
IS215T <input type="checkbox"/> LED Active?	0	0	7				0	0	0
IS215TCE	0	0	18				0	0	0
IS2260/IS2260T <input type="checkbox"/> LED Active?	0	0	4				0	0	0
IS2460	0	0	9				0	0	0
IS2500LT	0	0	25				0	0	0
IS2535/IS2535T	0	0	20				0	0	0
IS2560/IS2560T	0	0	20				0	0	0
IS2560TC	0	0	25				0	0	0
IS310/IS320 Request to Exit (RTE)	0	0	35				0	0	0
997 Ceiling Mount PIR <input type="checkbox"/> LED Active?	0	0	12				0	0	0
998 Wall Mount PIR <input type="checkbox"/> LED Active?	0	0	13				0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Dual Tech Motion Detectors									
DT-515	0	0	20	0			0	0	0
DT-6100STC	0	0	35	0			0	0	0
DT-7235T	0	0	20	0			0	0	0
DT-7435/DT-7435C	0	0	30	0			0	0	0
DT-7450/DT-7450MIC	0	0	35	0			0	0	0
DT-7550	0	0	40	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0			0	0	0

Power Overdraw if highlighted

Panel Max Output Exceeded if highlighted

grayed-out devices are not supported by selected panel

POLLING LOOP DEVICES	Enter Quantity	How many powered by 4297?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
4101SN Single Output Relay Module	0	0			7	0			
4190SN Two Zone SIM	0	0			2	0			
4190WH	0	0			2	0			
4191SN-WH	0	0			0.5	0			
4192CP	0	0			0.4	0			
4192SD Photoelectric Smoke Det.	0	0			0.4	0			
4192SDT	0	0			0.4	0			
4193SN Two Zone SIM	0	0			1.5	0			
4194 Contact	0	0			1	0			
4196	0	0			1	0			
4209U	0	0			15.5	0			
4275EX Dual PIR <input type="checkbox"/> LED Active?	0	0			1	0			
4275EX-SN Dual PIR <input type="checkbox"/> LED Active?	0	0			1	0			
4278EX-SN <input type="checkbox"/> LED Active?	0	0			1	0			
4293SN	0	0			1	0			
4939SN WH/BR/GY Surf Mt. Cntct.	0	0			1	0			
4944SN Recessed Contact	0	0			1	0			
4945SN-WH	0	0			0.5	0			
4959SN Overhead Door Contact	0	0			0.5	0			
5192SD Smoke Detector	0	0			2.8	0			
5192SDT Smoke Detector with Heat	0	0			2.8	0			
998MX PIR <input type="checkbox"/> LED Active?	0	0			1	0			
IS2500SN PIR <input type="checkbox"/> LED Active?	0	0			1.6	0			
FG-1625SN Glass Break Detector	0	0			1	0			
Quest2260SN <input type="checkbox"/> LED Active?	0	0			6	0			
Vplex-VSI Short Isolator	0	0			5	0			
Vistakey	0	0			2	0			
Add'l Vplex (enter qnt'y & current)	0	0			0	0			
Add'l Vplex (enter qnt'y & current)	0	0			0	0			

Polling Loop Overdraw if highlighted! Add 4297 Devices (row 41)

Panel Max Output Exceeded if highlighted

12V NOTIFICATION DEVICES ON BELL OUTPUT #1	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Sounder Current from Panel Bell #1	Total Sounder Current (external)
Enter device name, quant., & current	5	0		141				705	0
Enter device name, quant., & current	1	0		123				123	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0

Bell #1 Power Overdraw if highlighted!

Panel Max Output Exceeded if highlighted

12V NOTIFICATION DEVICES ON BELL OUTPUT #2 (IF USED)	Enter Quantity	How many powered externally?	Standby (aux pwr)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Sounder Current from Panel Bell #2	Total Sounder Current (external)
Enter device name, quant., & current	4	0		141				564	0
Enter device name, quant., & current	3	0		123				369	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0

Bell #2 Power Overdraw if highlighted!

Panel Max Output Exceeded if highlighted

12V AUX POWER AND BELL CIRCUIT WIRE RUN DATA	Units	Wire Gauge(AWG)	Ohms per 1000 ft	Alarm Current Draw (mA)	Run Length	Actual Resistance (twin leads)	Voltage At EOL	Voltage Drop (Percent)
Panel Aux Power Wire Run (twin lead)	Feet	<Select Wire Gauge>	0.00	15.00	0	0.00	12.00	0.00
Panel Bell 1 Wire Run (twin lead)	Feet	#16 AWG Solid	5.08	828.00	150	1.52	10.74	10.52
Panel Bell 2 Wire Run (twin lead)	Feet	#16 AWG Solid	5.08	933	150	1.52	10.58	11.88

PS24 Power Supply

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Standby/Alarm Durations (from top)

Battery Standby (hours): **24**

Alarm Duration (minutes): **5**

Required Capacity (AH) **1.059**

Use TWO identical batteries w/ this AH capacity **7.0**

Recommended Battery Capacity OK for 48-Hr Recharge

PS24 POWER SUPPLY MODULE, MAXIMUM CAPACITIES

Panel 12V Standby (mA)	Panel 12V Alarm (mA)	Output A Standby (mA)	Output A Alarm (mA)	Output B Standby (mA)	Output B Alarm (mA)	PS24 PC Board (mA)	Maximum Total Standby Output	Maximum Total Alarm Output	Max. Battery Capacity
305	2246	570	1700	570	1700	40	610	4180	34.4
0.0	0.0	0	0	0	0	40	Total Standby	Total Alarm	
305.0	2246.0	570.0	1700.0	570.0	1700.0		Standby Budget	Alarm Budget	34.4
Current						0	Current OK	Current OK	

☐ Using PS24 to back up Control Panel

Equivalent panel load @ 24V
(converted to 12VDC from 24V full-wave)
Power Budget

24V NOTIFICATION APPLIANCES Enter Device Names & Specifications	Enter Quantity	Which PS24 Output?	Device Standby Load (mA)	Device Alarm Load (mA)		Subtotal A Standby	Subtotal A Alarm	Subtotal B Standby	Subtotal B Alarm
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0
24V Notification Appliance	0	Output A ▼	0	0		0	0	0	0

Output Set

24V BELL CIRCUIT WIRE RUN DATA	Units	Wire Gauge(AWG)	Ohms per 1000 ft	Total Alarm Current Draw (mA)	Run Length	Actual Resistance (twin leads)	Voltage At EOL	Voltage Drop (Percent)
PS24 Output A Wire Run (twin lead)	Feet ▼	<Select Wire Gauge> ▼	0.00	0.00	0	0.00	24.00	0.00
PS24 Output B Wire Run (twin lead)	Feet ▼	<Select Wire Gauge> ▼	0.00	0.00	0	0.00	24.00	0.00

Unit Selection

INSTALLATION AND MAINTENANCE INSTRUCTIONS

SpectrAlert Horns, Strobes, and Horn/Strobes

For use with the following models:

Horns: 12/24 volt: H12/24
Strobes: 12 volt: S1215, S121575
24 volt: S2415, S2430, S241575, S2475, S24110
Combo: 12 volt: P1215, P121575
24 volt: P2415, P2430, P241575, P2475, P24110

Add suffix "K" for weatherproof horn and horn/strobe, red housing only.

Add suffix "K" for outdoor strobe only, red housing only.

Add suffix "F" for units marked FUEGO, "EV" for EVAC, or "AG" for AGENT, available on 241575, red housing only.

Add suffix "P" for plain (non-printed) 241575 only.

Add suffix "RLP" for Red Lens, "ALP" for Amber Lens, "GLP" for Green Lens, or "BLP" for Blue Lens. Available on 2475 plain, red housing only.

Add suffix "W" for white housing models.



SYSTEM SENSOR®

A Division of Pittway

3825 Ohio Avenue, St. Charles, Illinois 60174

1-800-SENSOR2, FAX: 630-377-6495

SPECTRAlert

Specifications

Voltage Range:

DC or Full-Wave Rectified

Horn:

10.5 to 30 Volts

Strobes & Horn/Strobes:

12-volt models - 10.5 to 17 volts; 24-volt models - 20 to 30 volts

(with MDL module):

12-volt models - 11 to 17 volts; 24-volt models - 21 to 30 volts

NOTE: Horn and combo units will operate on walk tests with on-time durations of 1 sec. or greater.

Flash Rate:

1 Flash Per Second

Operating Temperature:

32° F to 120° F (0° C to 49° C)

K Series:

Horn and horn/strobe models are indoor listed, having a temperature range of 32° F to 150° F (0° C to 66° C) and are Rainproof per UL50 (NEMA 3R).

Strobe only models have a temperature range of -40° F to 158° F (-40° C to 70° C), and are indoor/outdoor listed per UL1638 and indoor listed per UL1971. The S24110K is rated 60 candela @ -40° C. S2475K and S241575K are rated 41 candela @ -40° C.

Light Output:

Models with 15 only in the model number are listed at 15 candela

Models with 1575 are listed at 15 candela per UL 1971 but will provide 75 candela on axis (straight ahead)

Models with 30, 75 or 110 are rated for that candela.

Models with a red, amber, green or blue lens are listed at 75 candela per UL 1638.

Sound Output:

Sound output levels are established at Underwriters Laboratories in their reverberant room. Always use the sound output specified as UL Reverberant Room when comparing products.

Listings:

UL, FM, CSFM, MEA. K Series models are UL, CSFM, MEA listed only.

General Description

The SpectrAlert series notification appliances are designed to meet the requirements of most agencies governing these devices, including: NFPA, ADA, The National Fire Alarm Code, UL, FM, CSFM, MEA. Also, check with your local Authority Having Jurisdiction for other codes or standards that may apply.

The SpectrAlert series can be installed in systems using 12- or 24-volt panels having DC or full-wave rectified (FWR) power supplies. The series can also be installed in systems requiring synchronization (module MDL required) or systems that do not require synchronization (no module required).

NOTICE: This manual shall be left with the owner/user of this equipment.

Fire Alarm System Considerations

Temporal and Non-Temporal Coded Signals:

The American National Standards Institute and the National Fire Alarm Code require that all horns used for building evacuation installed after July 1, 1996, must produce Temporal Coded Signals.

Signals other than those used for evacuation purposes do not have to produce the Temporal Coded Signal. Temporal coding is accomplished by interrupting a steady sound in the following manner:



Power Supply Considerations

Panels typically supply DC filtered voltage or FWR (full-wave rectified) voltage. The system design engineer must calculate the number of units used in a zone based on the type of panel supply. Be certain the sum of all the device currents do not exceed the current capability of the panel. Calculations are based on using the device current found in the subsequent charts and must be the current specified for the type of panel power supply used.

Wire Sizes

The Designer must be sure that the last device on the circuit has sufficient voltage to operate the device within its rated voltage. When calculating the voltage available to the last device, it is necessary to consider the voltage drop due to the resistance of the wire. The thicker the wire, the less the voltage drop. Generally, for purposes of determining the wire size necessary for the system, it is best to consider all of the devices as "lumped" on the end of the supply circuit (simulates "worst case").

Typical wire size resistance:

18 AWG solid: Approximately 8 ohms/1,000 ft.
16 AWG solid: Approximately 5 ohms/1,000 ft.
14 AWG solid: Approximately 3 ohms/1,000 ft.
12 AWG solid: Approximately 2 ohms/1,000 ft.

Example: Assume you have 10 devices on a zone and each requires 50 mA average and 2000 Ft. of 14 AWG wiring (total length=outgoing + return). The voltage at the end of the loop is 0.050 amps per device x 10 devices x 3 ohms/1,000 ft. x 2000 ft = 3 volts drop.

Strobe Only:

Candela		AVERAGE CURRENT (mA)												PEAK CURRENT (mA)												IN RUSH CURRENT (mA)											
		12V Models						24V Models						12V Models						24V Models						12V Models						24V Models					
		10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V						
15	133	159	114	157	81	128	60	61	43	60	38	60	480	480	480	420	480	135	204	135	208	135	185	80	108	92	124	140	190	97	129	116	152	147	198		
15/75	168	182	142	171	99	150	56	65	48	64	44	62	490	520	480	520	480	150	198	150	207	150	198	78	104	88	128	160	185	97	135	116	164	147	211		
30	NA	NA	NA	NA	NA	NA	78	84	67	82	58	72	NA	NA	NA	NA	NA	183	201	183	219	183	218	NA	NA	NA	NA	NA	NA	97	129	116	152	147	198		
75	NA	NA	NA	NA	NA	NA	145	170	123	159	102	141	NA	NA	NA	NA	350	440	340	480	330	480	NA	NA	NA	NA	NA	NA	190	240	230	280	290	380			
110 *	NA	NA	NA	NA	NA	NA	169	220	140	191	115	174	NA	NA	NA	NA	NA	480	560	450	570	420	620	NA	NA	NA	NA	NA	NA	190	230	220	290	290	370		

*75 cd models with colored lens

Horn Only:

Tone	High/Low Volume	Temp /Non	AVERAGE CURRENT (mA)												AVERAGE CURRENT (mA)											
			12V Models						24V Models						12V Models						24V Models					
			10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V
Electro-mech.	High	Temp	10	11	10	14	14	19	21	25	18	28	28	28	10	11	10	14	14	19	21	25	18	28	28	28
		Non	10	16	10	19	14	25	17	29	23	34	30	42	10	16	10	19	14	25	17	29	23	34	30	42
	Low	Temp	NA	NA	NA	NA	NA	11	12	13	13	17	15	15	NA	NA	NA	NA	NA	12	16	14	19	17	24	24
3000 Hz Interrupt.	High	Temp	11	13	11	11	16	18	24	28	28	37	33	33	11	13	11	11	16	18	24	28	28	37	33	33
		Non	11	17	11	21	14	28	19	34	27	39	35	45	11	17	11	21	14	28	19	34	27	39	35	45
	Low	Temp	NA	NA	NA	NA	NA	14	14	17	15	21	19	19	NA	NA	NA	NA	NA	14	14	17	15	21	19	19
		Non	NA	NA	NA	NA	NA	13	18	16	21	22	25	25	NA	NA	NA	NA	NA	13	18	16	21	22	25	25

Horn/Strobe 15 ed:

Tone	High/Low Volume	Temp /Non	AVERAGE CURRENT (mA)												AVERAGE CURRENT (mA)											
			12V Models						24V Models						12V Models						24V Models					
			10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V
Electro-mech.	High	Temp	143	170	124	167	95	142	89	82	68	78	67	87	143	170	124	167	95	142	89	82	68	78	67	87
		Non	143	170	124	167	95	142	89	82	68	78	67	87	143	170	124	167	95	142	89	82	68	78	67	87
	Low	Temp	NA	NA	NA	NA	NA	81	73	56	73	55	78	78	NA	NA	NA	NA	NA	82	77	57	79	55	85	85
3000 Hz Interrupt.	High	Temp	144	172	125	168	97	144	74	87	71	83	75	94	144	172	125	168	95	148	89	85	70	99	73	106
		Non	144	173	125	168	95	148	89	85	70	99	73	106	144	173	125	168	95	148	89	85	70	99	73	106
	Low	Temp	NA	NA	NA	NA	NA	64	75	60	75	58	80	80	NA	NA	NA	NA	NA	64	75	60	75	58	80	80
		Non	NA	NA	NA	NA	NA	63	79	59	81	60	86	86	NA	NA	NA	NA	NA	63	79	59	81	60	86	86

Horn/Strobe 1575 ed:

Tone	High/Low Volume	Temp /Non	AVERAGE CURRENT (mA)												AVERAGE CURRENT (mA)											
			12V Models						24V Models						12V Models						24V Models					
			10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V	10.5V	12V	17V	20V	24V	30V
Electro-mech.	High	Temp	178	193	152	181	113	164	75	86	74	82	73	88	178	193	152	181	113	164	73	84	72	98	74	104
		Non	178	193	152	181	113	164	73	84	72	98	74	104	178	193	152	181	113	164	73	84	72	98	74	104
	Low	Temp	NA	NA	NA	NA	NA	88	81	63	83	81	86	86	NA	NA	NA	NA	NA	88	81	63	83	81	86	86
3000 Hz Interrupt.	High	Temp	179	195	152	183	115	168	80	91	77	87	81	95	179	195	152	183	113	168	75	89	78	103	79	107
		Non	179	195	152	183	113	168	75	89	78	103	79	107	179	195	152	183	113	168	75	89	78	103	79	107
	Low	Temp	NA	NA	NA	NA	NA	70	79	66	79	65	81	81	NA	NA	NA	NA	NA	70	79	66	79	65	81	81
		Non	NA	NA	NA	NA	NA	69	83	65	85	66	87	87	NA	NA	NA	NA	NA	69	83	65	85	66	87	87

Sound Output Guide

			UL Reverberant Room dBA @ volts DC						Anechoic dBA @10 ft./volts DC					
			10.5	12	17	20	24	30	10.5	12	17	20	24	30
			NA	NA	NA	75	75	79	NA	NA	NA	94	96	98
Temporal	Low Volume	Electromechanical	NA	NA	NA	75	75	79	NA	NA	NA	94	96	98
		3000 Hz Interrupted	NA	NA	NA	75	79	79	NA	NA	NA	94	96	98
	High Volume	Electromechanical	75	75	79	82	82	82	94	95	98	100	101	102
		3000 Hz Interrupted	75	75	79	82	85	85	94	95	98	100	101	102
Non-Temporal	Low Volume	Electromechanical	NA	NA	NA	79	82	85	NA	NA	NA	94	96	98
		3000 Hz Interrupted	NA	NA	NA	82	82	85	NA	NA	NA	94	96	98
	High Volume	Electromechanical	79	79	85	85	88	88	94	95	98	100	101	102
		3000 Hz Interrupted	79	82	85	88	88	88	93	95	98	100	101	102

The same number of devices using 12 AWG wire will produce only 2 volts drop. The same devices using 18 AWG wire will produce 8 volts drop. Consult your panel manufacturer's specifications, as well as SpectraAlert's operating voltage range to determine acceptable voltage drop.

Horn Selections

Horns are factory set for high volume, temporal code, and electromechanical tone.

Tones:

Two tones may be selected using the jumper plugs located on the printed circuit board. With the jumper offset, the tone is the Electromechanical sound. With the jumper in place, the tone is a 3 kHz sound.

NOTE: When powered from FWR supply, tones will be modulated (turned on and off) by 120Hz causing the tones to sound different from DC power.

Temp/Non-Temp:

Temporal coding or Non-Temporal coding can be selected using the jumper plugs located on the printed circuit board. With the jumper offset, the tone pattern is the Temporal Coded Signal. With the jumper in place, the Non-Temporal code (continuous) tone is active.

High/Low Volume:

High or low volume may be selected using the jumper plugs located on the printed circuit board. With the jumper in place, the sound output level is the high level. With the jumper offset, the sound output level is the low level. The low volume setting must NOT be used when the device is powered from a 12-volt panel.

NOTE: Always power down devices before setting jumpers.

System Operation: Non-Synchronized Devices

Figure 1A. Any combination of models powered by a 2-wire circuit:

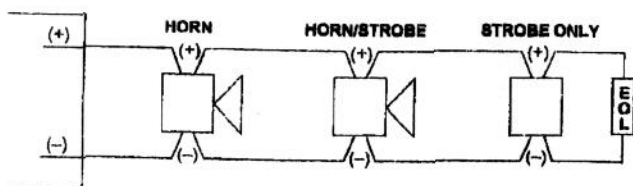


Figure 1B: Horns and strobes powered in tandem:

NOTE: Supply power must be continuous for proper operation.

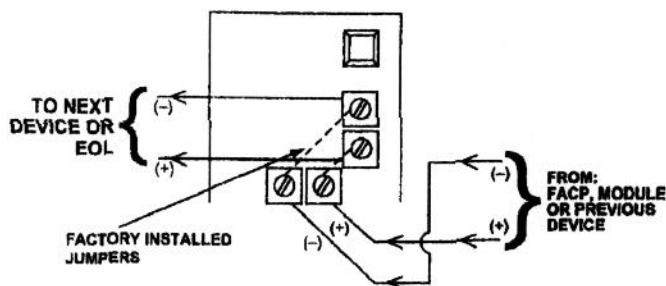


Figure 2A. Any combination of models powered by a 4-wire circuit to provide independent horn and strobe operation (Remove factory installed jumpers, see Figure 2B):

NOTE: Strobes must be powered continuously for horn operation.

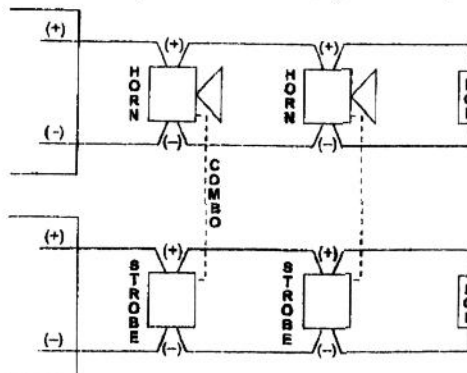
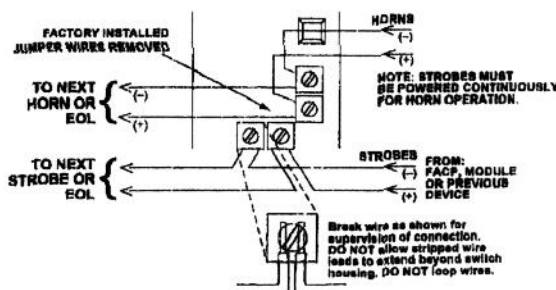


Figure 2B: Horns and strobes powered independently (Horn operated on coded power supply):

NOTE: Strobes must be powered continuously for horn operation.



WARNING

The Limitations of Horn/Strobes

The horn and/or strobe will not work without power. The horn/strobe gets its power from the fire/security panel monitoring the alarm system. If power is cut off for any reason, the horn/strobe will not provide the desired audio or visual warning.

The horn may not be heard. The loudness of the horn meets (or exceeds) current Underwriters Laboratories' standards. However, the horn may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The horn may not be heard if it is placed on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise such as traffic, air conditioners, machinery or music appliances that may prevent alert persons from hearing the alarm. The horn may not be heard by persons who are hearing impaired.

NOTE: Strobes must be powered continuously for horn operation.

The signal strobe may not be seen. The electronic visual warning signal uses an extremely reliable xenon flash tube. It flashes at least once every second. The strobe must not be installed in direct sunlight or areas of high light intensity (over 80 foot candles) where the visual flash might be disregarded or not seen. The strobe may not be seen by the visually impaired.

The signal strobe may cause seizures. Individuals who have positive photic response to visual stimuli with seizures, such as persons with epilepsy, should avoid prolonged exposure to environments in which strobe signals, including this strobe, are activated.

The signal strobe cannot operate from coded power supplies. Coded power supplies produce interrupted power. The strobe must have an uninterrupted source of power in order to operate correctly. System Sensor recommends that the horn and signal strobe always be used in combination so that the risks from any of the above limitations are minimized.

Three-Year Limited Warranty

System Sensor warrants its enclosed horn, strobe, or horn/strobe to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this horn, strobe, or horn/strobe. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the horn, strobe, or horn/strobe which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid

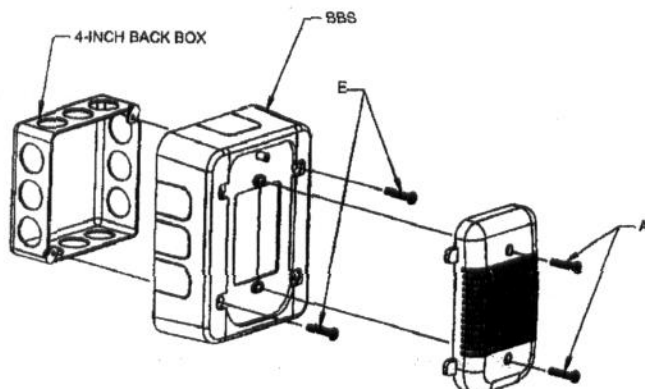
to: System Sensor, Repair Department, RA # _____, 3825 Ohio Avenue, St. Charles, IL 60174. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Mounting Diagrams:

Screw types used for mounting:

- A = #8 x 1-1/4 plastite
- B = 6-32 x 1-3/8 oval head
- C = 6-32 x 1-5/16 pan head
- D = #6 plastite
- E = 8-32 x 3/4 flat head

Horn surface mount:

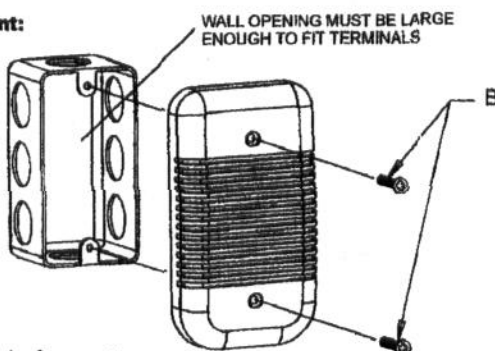


1. Mount skirt to back box with screws E.
2. Complete field wiring.

3. Mount unit to skirt with screws A.

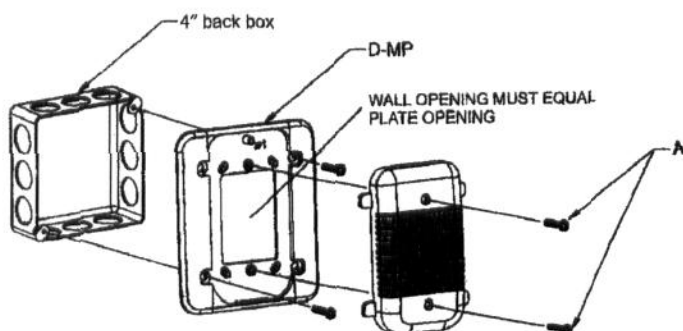
NOTE: Horn and skirt may also mount to a 2-inch box using screws B instead of screws A.

Horn direct mount:



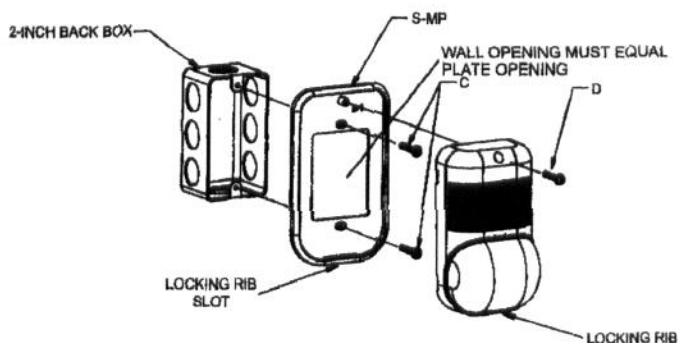
1. Break off four tabs from unit.
2. Complete field wiring.
3. Mount unit to back box with screws B, making sure wall opening is large enough for terminals to fit through.

Horn with universal mounting plate:



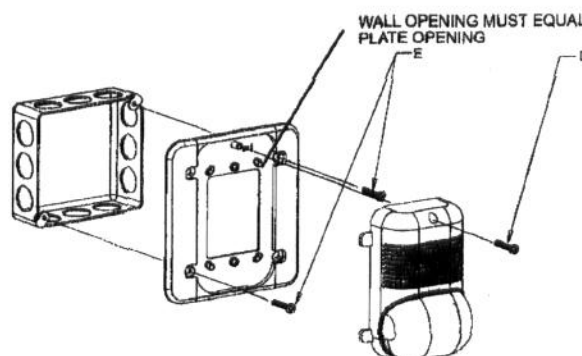
1. Mount plate to back box, making sure wall opening is equal to the plate opening.
2. Slip wires through plate.
3. Complete field wiring.
4. Mount unit to back box with screws A.

Strobe or Horn/Strobe with small footprint mounting plate:



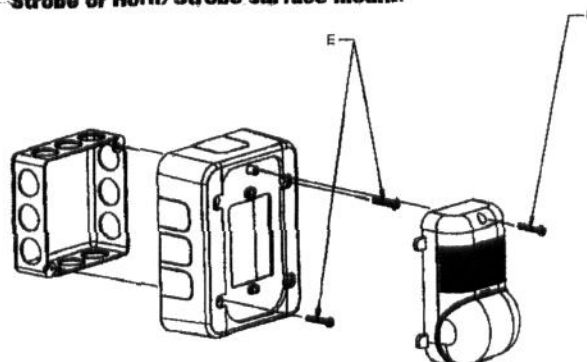
1. Screw plate to back box with screws C, making sure wall opening is equal to plate opening.
2. Break off four tabs from unit.
3. Complete field wiring.
4. Insert locking rib on unit into slot on plate.
5. Push into plate.
6. Secure unit to plate with screw D.

Strobe or Horn/Strobe with universal mounting plate:



1. Mount plate to back box with screws E, making sure wall opening is equal to plate opening.
2. Complete field wiring.
3. Insert locking rib into slot on plate.
4. Push into plate.
5. Secure unit to plate with screw D.

Strobe or Horn/Strobe surface mount:



1. Mount skirt to back box with screws E.
2. Complete field wiring.
3. Insert locking rib into slot on plate.
4. Push into recessed area.
5. Secure unit to skirt with screw D.

Fire-Lite® Alarms by Honeywell

BG-12L Manual Pull Station

Patented, U.S. Patent No. Des. 428,351; 6,380,846; Other Patents Pending
Document 50964
156-2263-004

Description

The BG-12L pull station is a non-coded, dual-action manual pull station with a key-lock reset feature. It provides Fire-Lite control panels with one normally open (N/O) alarm initiating input. The BG-12L meets the ADAAG controls and operating mechanisms guidelines (section 4.1.3(13)), and the ADA requirement for a 5 lb. maximum pull force to activate the pull station. Operating instructions are molded into the pull station handle along with Braille text. Molded Terminal numbers are also present.

Ratings

Switch contact (N/O) is gold plated for reliability and rated at 0.25 A at 30 volts (AC or DC).

Installation

The BG-12L pull station can be surface mounted to an SB-10 or SB-1/O surface backbox or semi-flush mounted on a standard single-gang, double-gang or 4" (10.16 cm) square electrical box. The optional BG-TR trim ring can be used if the BG-12L is to be semi-flush mounted.

Operation

To activate the dual-action pull station, push in and pull down on the handle. The word 'ACTIVATED' appears after the handle is pulled down. This will remain until the pull station is reset.

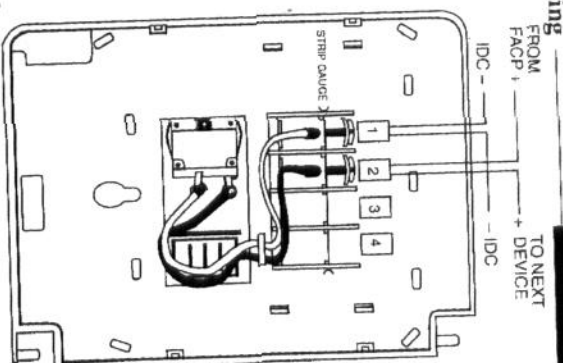
The pull station includes one Single Pole, Single Throw (SPST) Normally Open (N/O) switch which closes upon activation of the pull station.

Resetting the Pull Station

1. Insert the key into the lock and rotate 1/4 turn counterclockwise.
2. Open the door until the handle returns to normal.
3. Close and lock the door.

Note: Closing the door automatically resets the switch to the 'Normal' position. Opening the door will not activate or deactivate the alarm switch.

Wiring



P0205-00

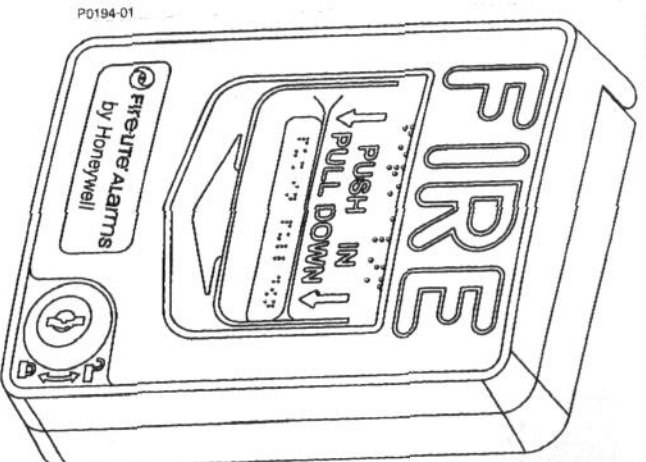
WARNING: DO NOT LOOP WIRING UNDER ANY TERMINALS. BREAK WIRE RUN TO MAINTAIN IDC SUPERVISION.

WARNING! Do not loop wiring under any terminals. Break wire run to maintain IDC supervision.

Document 50964

BG-12L Manual Pull Station

156-2263-004



P0194-01

CAUTION! Do not detach the door of the pull station during installation. The door of the pull station cannot be reattached to the backplate after the backplate has already been installed onto an electrical box.

CAUTION!

Install the Fire-Lite BG-12L pull station in accordance with these instructions. Install the Fire-Lite BG-12L pull station in accordance with these instructions, applicable NFPA standards, national and local Fire and Electrical codes and the requirements of the AHJ (Authority Having Jurisdiction). Regular testing of the devices should be conducted in accordance with the appropriate NFPA standards. Failure to follow these directions may result in failure of the device to report an alarm condition. Fire-Lite is not responsible for devices that have been improperly installed, tested or maintained.

ADA Compliance

For ADA compliance, if the clear floor space only allows forward approach to an object, the maximum forward reach height allowed is 48 inches (121.92 cm). If the clear floor space allows parallel approach by a person in a wheelchair, the maximum side reach allowed is 54 inches (137.16 cm).

FIRE-LITE ALARMS by Honeywell

Addressable



BG-12LX

Addressable Manual Pull Station

General

The Fire-Lite BG-12LX is a state-of-the-art, dual-action (i.e., requires two motions to activate the station) pull station that includes an addressable interface (mounted inside) for Fire-Lite's addressable fire alarm control panels (FACPs). Because the BG-12LX is addressable, the control panel can display the exact location of the activated manual station. This leads fire personnel quickly to the location of the alarm.

Features

- Maintenance personnel can open station for inspection and address setting without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word "ACTIVATED" appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.25 mm² wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Activated Signaling Boxes.

Construction

Shell, door, and handle are molded of durable LEXAN® (or polycarbonate equivalent) with a textured finish.

Specifications

- Normal operating voltage: 24 VDC.
- Maximum SLC loop voltage: 28.0 VDC.
- Maximum SLC loop current: 230 µA.
- Ambient Temperature: 32°F to 120°F (0°C to 49°C)
- Relative Humidity: 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F)
- For use indoors in a dry location

Installation

The BG-12LX will mount semi-flush into a single-gang, double-gang, or standard 4" (10.16 cm) square electrical outlet box, or will surface mount to the model SB-10 or SB-I/O surface back-box. If the BG-12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used. The BG12TR is usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

Architectural/Engineering Specifications

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red-colored LEXAN (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTIVATED" (in bright yellow) appears at the top of the handle, while a portion of the handle protrudes from the bottom of the station. To reset the station, simply unlock the station with the key and pull the door open. This action resets the handle; closing the door automatically resets the switch.

Each manual station, on command from the control panel, sends data to the panel representing the state of the manual switch. Two rotary decimal switches allow address settings (1 – 159 with Breakaway Tab removed for MS-9600, 1 – 99 and MS-9200UDLS, 1 – 50 for MS-9050UD).

Operation

Specifications

Models	281B-PL	282B-PL	283B-PL	284B-PL
Features	Fixed temperature and rate-of-rise		Fixed temperature ONLY	
UL/ULC rating temperature	135 °F (57.2 °C)	194 °F (90 °C)	135 °F (57.2 °C)	194 °F (90 °C)
UL/ULC maximum ambient temperature at ceiling	100 °F (37.8 °C)	150 °F (65.6 °C)	100 °F (37.8 °C)	150 °F (65.6 °C)
Rate-of-rise rating	15 °F (9.4 °C)	15 °F (9.4 °C)	-	-

Recommended spacing (see Note A): 50 ft (15.2 m)
 Maximum distance from wall (see Note B): 25 ft (7.6 m)
 All detectors have one normally open contact rated as follows: 3.0 A at 6 to 125 Vac, 1.0 A at 6 to 24 Vdc, 0.3 A at 125 Vdc, and 0.1 A at 250 Vdc.

Note A: Maximum detector coverage has been determined by UL to provide detection time equal to sprinkler devices spaced at 10 ft (3 m) intervals (100 sq ft area) on a smooth ceiling 15 ft 9 in (4.8 m) high. Higher ceilings can adversely affect detection time. In some instances, earlier detection may be obtained by reducing the spacing between detectors.

Note B: Maximum distance shown is from any wall partition or ceiling projection extending down more than 12 in (305 mm).

Installation instructions

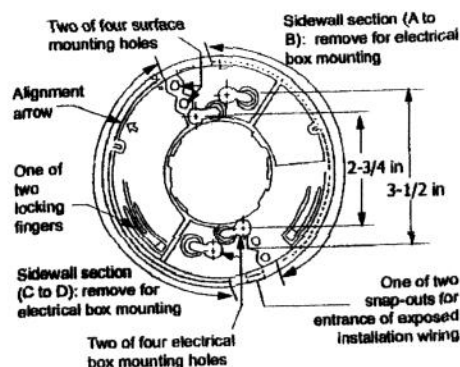
Surface Mounting

When using exposed installation wiring, remove either or both snapouts for wire entrance from the plate, as required (see figure). With the side of the plate marked "FOR SURFACE MOUNTING" facing out, fasten the plate to the surface by installing two #8 wood screws (not supplied) or other suitable fasteners through either the inner or outer pair of surface mounting holes in the plate.

Route the installation wiring either through the center hole in the mounting plate when the wiring is concealed or through the openings in the side of the plate when the wiring is exposed. Connect the wiring to the detector.

To install the detector: Align the arrows on the mounting plate and on the detector base, seat the detector on the plate and turn the detector clockwise until it locks in place.

To remove the detector: Insert the tip of a screwdriver into the rectangular slot in the side of the detector base (see applicable mounting illustration for location of slot), lift the locking finger of the mounting plate, and turn the detector counterclockwise until it can be withdrawn from the plate.



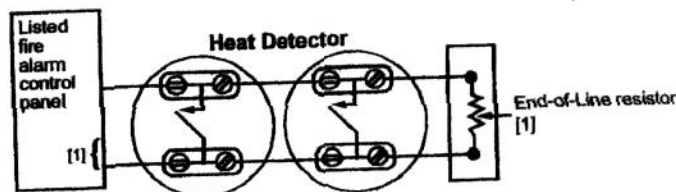
WARNINGS: This device will not protect life against fire and smoke. Where life safety is a factor, the use of smoke detectors is recommended.

This device does not contain a built in signal.

This device will not operate without electrical power. This device does not contain battery backup. It should be electrically supervised with battery backup at the panel.

The rate-of-rise feature may be subject to reduced sensitivity over time. Annual testing of the rate-of-rise operation is recommended. Refer to the latest issue of NFPA 72 or CAN/ULC-S536 for application, testing, inspection, and maintenance requirements. Refer to the latest issue of NFPA 72, CAN/ULC-524-M86 and Canadian Electrical Code, Part 1, Section 32 for proper installation requirements.

Wiring diagram



Note:

[1] Refer to the wiring diagrams provided with the control panel for proper panel connections and end-of-line resistor value.

Maintenance and testing

The requirements for maintenance and testing of heat detectors are covered in the latest edition of NFPA 72, Chapter 7 (inspections, tests, and maintenance). The standard requires that:

- For initial installation, all restorable heat detectors (rate-of-rise feature) must be tested immediately after installation.
- For periodic testing for restorable heat detectors (rate-of-rise feature) two or more detectors on each initiating circuit should be tested at least yearly. Different detectors should be selected for each test so that all detectors are tested within five years.




Plan Review, Inspection and Permit Fees

Application Number 07-50016983

\$150.00	<input type="checkbox"/>	Explosive Mat. (90 Days)
\$ 75.00	<input type="checkbox"/>	Explosive Mat. (72 Hrs)
\$ 25.00	<input type="checkbox"/>	Fireworks Public Display
\$ 35.00	<input type="checkbox"/>	Final Inspection
\$ 35.00 +2.00 per device	<input checked="" type="checkbox"/>	Fire Alarm Testing
\$ 35.00 + 2.00 per nozzle	<input type="checkbox"/>	Fixed Fire Suppression
\$ 25.00	<input type="checkbox"/>	Insecticide Fog/Fumigation
\$ 50.00	<input type="checkbox"/>	Pipe Test/UST/AGST
\$ 50.00	<input type="checkbox"/>	Plans up to 5000 ft ²
\$100.00	<input type="checkbox"/>	Plans 5001 ft ² to 10,000 ft ²
\$150.00	<input type="checkbox"/>	Plans 10,001 ft ² to 25,000 ft ²
\$250.00	<input type="checkbox"/>	Plans 25,001 ft ² and over
\$ 35.00 + 2.00 per Head	<input type="checkbox"/>	Sprinkler Certification Test
\$ 35.00	<input type="checkbox"/>	Standpipe Testing
\$ 25.00	<input type="checkbox"/>	Special Assembly
\$ 25.00	<input type="checkbox"/>	Temporary Kiosks/Displays
\$ 25.00	<input type="checkbox"/>	Tents, Canopies, Air Supported
\$ 50.00	<input type="checkbox"/>	Tank Installation (charge for each tank)
\$ 50.00	<input type="checkbox"/>	Tank Removal (charge for each tank)

\$ 69.00 Total

17 detection devices Total device/heads

Michael L. Martin 
Code Enforcement Official

10/12/12
Date



Harnett
COUNTY
NORTH CAROLINA



Emergency Services Department

www.harnett.org

October 12, 2012

Curtiss Shirley
All American Alarms
PO Box 599
Parkton, NC 28371

Little Miracles Daycare
1497 NC 24-87
Cameron, NC 28326

Application Number 07-50016983

Mr. Shirley;

Thank you for submitting the fire alarm plans for the daycare. The plans have been carefully reviewed by a qualified code enforcement official to examine for full compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the new facility can be given. These items are outlined and described below.

- **907.1.2 Fire Alarm Equipment**
 - Systems and their components shall be listed and approved for the purpose for which they are installed.
- **907.17 Acceptance tests.**
 - Upon completion of the installation of the fire alarm system, alarm notification appliances and circuits, alarm-initiating devices and circuits, supervisory-signal initiating devices and circuits, signaling line circuits, and primary and secondary power supplies shall be tested in accordance with NFPA 72
 - 100 % testing of devices



- **907.18 Record of completion.**
 - A record of completion in accordance with NFPA 72 verifying that the system has been installed in accordance with the approved plans and specifications shall be provided

Thank you again for submitting fire alarm plans for the daycare. Please review the plans and adhere to any notes and alterations that were made in addition to the original drawings. These remarks are for the plans that were submitted and its original intent. These remarks do not apply if the original intent changes or what was submitted on the above date changes. If you have any questions, please do not hesitate to call this office.

Again, thank you and we look forward to working with you during the construction period!

Sincerely,

Michael L. Martin
Chief Deputy Fire Marshal

Harnett County Emergency Services

Office of the Fire Marshal
P.O. Box 370
Lillington, N.C. 27546
(910)-893-7580

Permit Certificate

Business Name: LITTLE MIRACLES DAYCARE

Address: 1497 NC 24-87
Cameron, NC 28326

Phone:

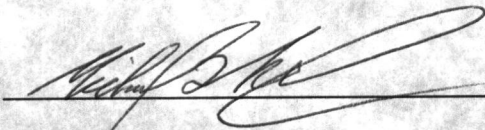
The following permit has been issued:

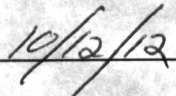
Permit No. 0120069

Type: 045 Fire Alarm Permit

Issued Date: 10/12/2012
Effective Date: 10/12/2012
Expiration Date: 04/12/2013

This permit certificate has been issued for [☒] construction / [☐] operational purposes located at the above business location. This permit has been issued and will be enforced in accordance with section 105 of the N.C. State Fire Prevention Code. Please contact our office for any further questions regarding this permit.


Inspector: Michael (30) L Martin


Date