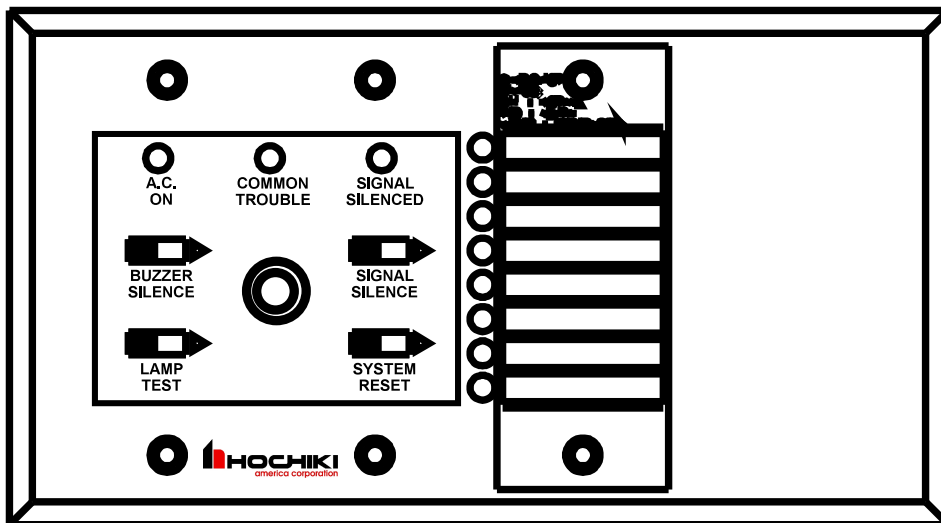


HRAM-208

Remote Multiplex Annunciator Panels

WIRING and INSTALLATION INSTRUCTION



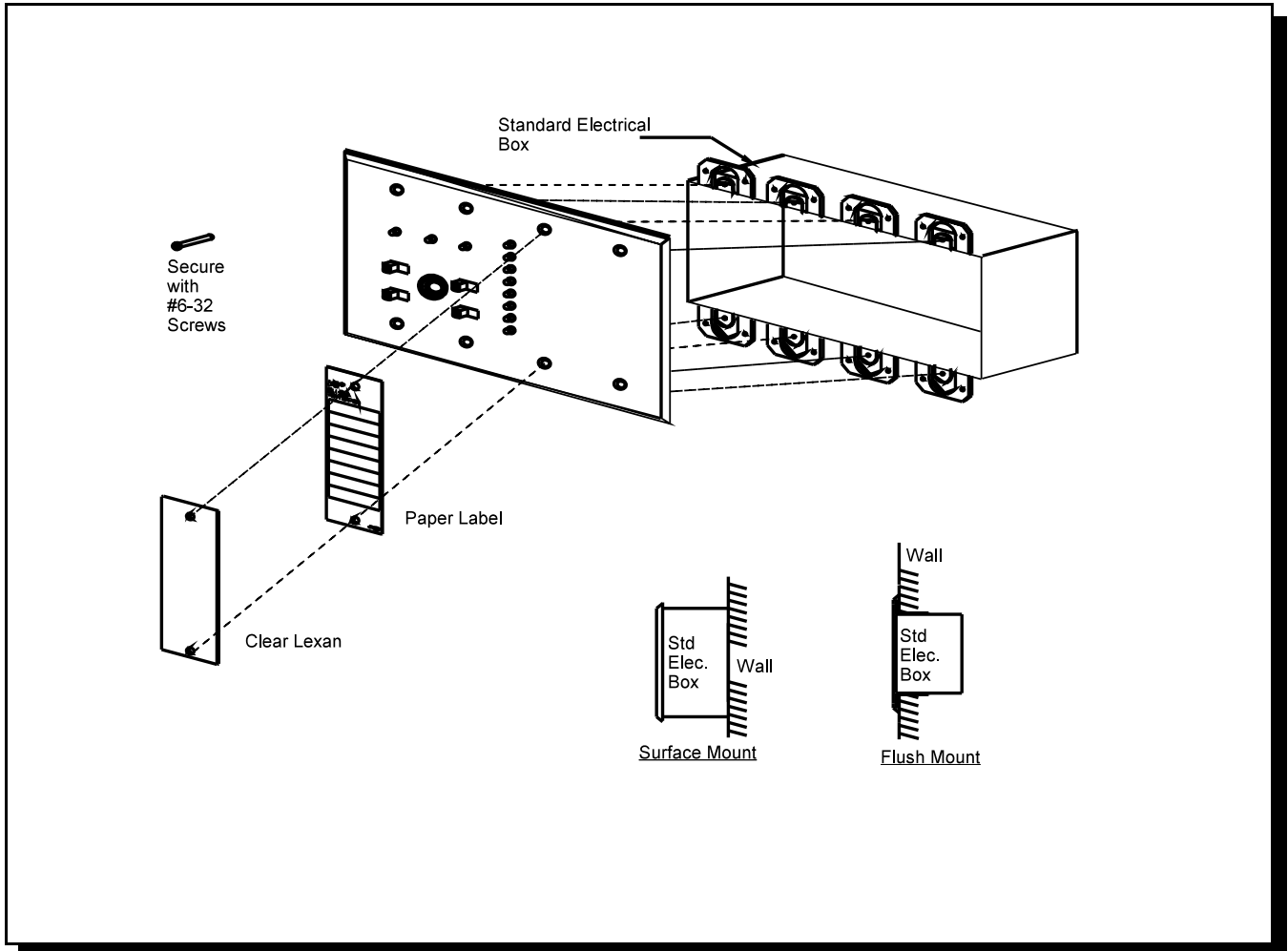
NOTICE

All information, documentation, and specifications contained in this manual are subject to change without prior notice by the manufacturer.

INTRODUCTION:

Hochiki's **HRAM-208 Annunciator** is an 8 Circuit Annunciator for use with Hochiki's **HCP-202, HCP-204, HCP-204E Fire Alarm Control Panels**, that mounts into a standard 4-gang electrical boxes, which may not be expanded. Control access is by a keyswitch. Each Circuit Indicator is a bi-color LED that is automatically configured to match the Fire Alarm Control Panel configuration.

INSTALLATION INSTRUCTION:



NOTES:

Note that the **HRAM-208** is supplied with **NP-386 Labels**.

This Annunciator displays Initiating Circuit Status only (no individual Circuit Troubles). Indicating and Relay Circuits are not remotely displayed. See the Fire Alarm Control Panel Manual for more details.

The **HRAM-208** has a keyswitch to enable the four slide-switch controls. The key should be appropriately secured.

CONTROLS & DISPLAYS:

For precise definitions of Control & Display operation, refer to the manual for the Fire Alarm Control Panel that the Annunciator is being connected to.

Controls

System Reset, Signal Silence, Buzzer Silence, Lamp Test.

Displays

AC On, Common Trouble, Signal Silence, 8 Circuit Status LED's.

WIRING INSTRUCTION:

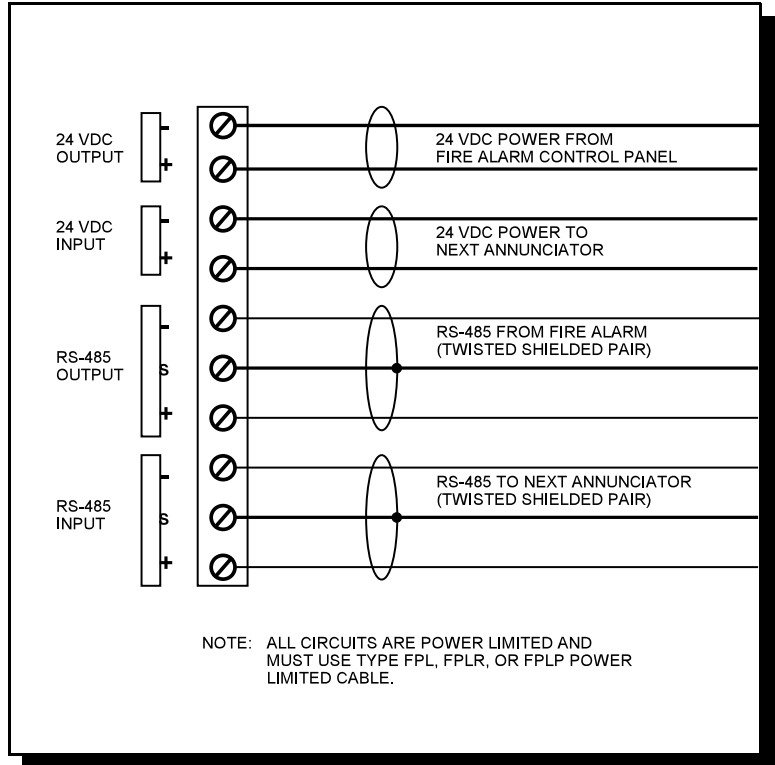
The **RS-485 Wiring** to the HRAM-208 Module is recommended to be **Twisted Shielded Pair** as shown in the diagram. The wire gauge may be;

- 22 AWG up to 2000 ft.
- 20 AWG up to 4000 ft.
- 18 AWG up to 8000 ft.

The RS-485 wiring from the Fire Alarm Control Panel to the Annunciator(s) must be point-to-point from the FA Panel to the first Annunciator, then the next Annunciator, and so on. **No star-wiring or T-tapping is allowed.** Each RAM-208 Annunciator Module has a **120 ohm End-of-Line Resistor** on its RS-485 Output terminals. This is removed on all except the last wired Module.

The 24 VDC field wiring needs to be of an appropriate gauge for the number of annunciators and the total wiring run length. See the **Specifications** section "**Current Drain for Battery Calculations**", and calculate the **Maximum** current for all Annunciators summed together ...

NOTE: Accidentally connecting any of the 24 VDC wires to the RS-485 wiring could result in damage to the Annunciator and/or to the Fire Alarm Control Panel that it is connected to !!!



Maximum for all Annunciators	MAXIMUM WIRING RUN TO LAST ANNUNCIATOR								MAX. LOOP RESISTANCE
	18AWG		16AWG		14AWG		12AWG		
Amperes	ft	m	ft	m	ft	m	ft	m	Ohms
0.30	470	143	750	229	1200	366	1900	579	6
0.60	235	71	375	114	600	183	850	259	3
0.90	156	47	250	76	400	122	570	174	2
1.20	118	36	185	56	300	91	425	129	1.5
1.50	94	29	150	46	240	73	343	105	1.2
1.70	78	24	125	38	200	61	285	87	1.0

DIP SWITCH SETTINGS:

Each Annunciator needs to be assigned a unique, sequential “**Address**”. This is done with DIP Switches, which also allow disabling of some buttons.

SW1-1 = Address A0 \
SW1-2 = Address A1 > Address “A3” is always “off”.
SW1-3 = Address A2 /
SW1-4 = When “off”, the System Reset and Signal Silence slide-switches are always disabled, regardless of the operation of the keyswitch.

The Annunciator “Address” (see the Manual for the Fire Alarm Control Panel being used), is set as ...

DIP Switch Positions	Annunciator “Address”						
	1	2	3	4	5	6	7
SW1-1 (A0)	on	off	on	off	on	off	on
SW1-2 (A1)	off	on	on	off	off	on	on
SW1-3 (A2)	off	off	off	on	on	on	on
SW1-4 (A3)	off	off	off	off	off	off	off

Annunciators on a common RS-485 connection must be numbered sequentially; i.e.: 1,2,3,4, and not randomly such as 5,3,7 !! Note that not all Annunciator “Addresses” are valid for all Fire Alarm Control Panels. Refer to the Fire Alarm Control Panel Manual for further information.

SPECIFICATIONS & FEATURES

Enclosure:

A standard 4-gang Electrical Box is used.

Electrical Specs.:

- 19 to 31 VDC (filtered or full-wave-rectified)
- Slide-Switch Controls, LED indicators, and Keyswitch to enable Controls.
- Local Buzzer, Indicators (AC-On, Common Trouble, Signal Silence), and Controls (System Reset, Lamp Test, Buzzer Silence, Signal Silence).
- Annunciation of up to 8 Points.
- Not Expandable.
- Standby: 35 mA Max., All LED’s “On”: 90 mA Max.

Current Drain for Battery Calculations:

The maximum normal current drain will be during Lamp Test when all lamps are illuminated on one chassis at a time. Thus the currents are ...

Normal Standby = 35 mA **Maximum** = 90 mA

The **Normal Standby Current** is used for Battery Size Calculations (see the Fire Alarm Control Panel manual) and includes the current drain for the Trouble Buzzer, Trouble LED, and one Alarm LED. The **Maximum Current** is used to calculate the wire size (see the **Wiring Instruction**).

WARRANTY

Hochiki America Corporation, manufactured equipment is guaranteed to be free of defects in material and workmanship for a period of one (1) year from the date of original shipment. HOCHIKI will repair or replace, at its option, any equipment which it determines to contain defective material or workmanship. Said equipment must be shipped to HOCHIKI prepaid. Return freight will be prepaid by HOCHIKI. We shall not be responsible to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way. Unless previously contracted by HOCHIKI, HOCHIKI will assume no responsibility for determining the defective or operative status at the point of installation, and will accept no liability beyond the repair or replacement of the product at our factory service department.

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