

### Remote or Local Annunciators for installation in, on or near monitored equipment

#### Benefits

- Easy to install, use and service
- Exceptional reliability and economy
- Virtually false-alarm free
- "Group" remote alarming (up to 12 points) with an inexpensive two-wire cable run
- Long service life in the toughest environments

#### Features

- Many models available to meet specific requirements
- Flexible operation – 12 monitoring points with individual alarm control for each
- Compact; rear, flush or 19" rack mounting
- Optional feed-through rear terminal barriers
- Optional "Plug In" Modules - B1000 Series

#### Applications

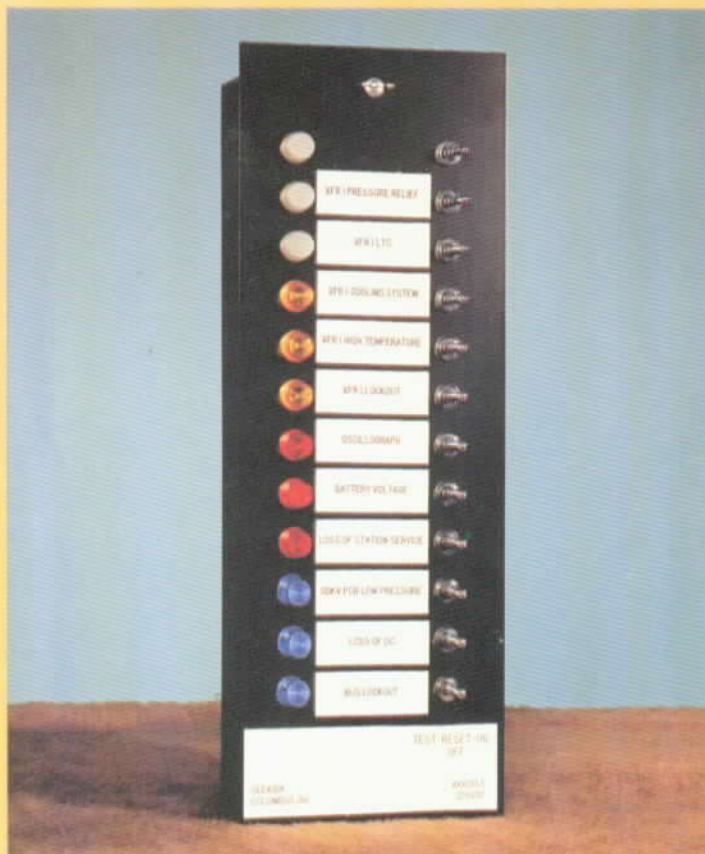
Series A1000 and B1000 annunciators are designed for use with many different types of equipment. Models in this Series are very reliable, inexpensive, compact 12-point annunciators. Self-contained in NEMA 1 enclosures, the units can be externally mounted and used in adverse environments. Their compact size also permits flush mounting or rear mounting within equipment enclosures or control consoles. These features make the units ideal for monitoring all types of transformers, rotating machinery, production line equipment and security systems. In general, any equipment with sensors that indicate status by the opening or closing of sets of contacts, can be monitored.

The small size and low cost of A1000 and B1000 Series annunciators make them ideal for applications in remote, unattended areas. In addition to those features each annunciating point provides individual alarm control. This permits a versatile selection of alarm arrangements. For example, when used in a distant, unattended area, all alarm contacts can be connected in parallel to a single pair of wires going to an annunciator or alarm horn in an attended area. When used in an attended area, single points or groups of points may be used to control different kinds of alarms, e.g. major and minor alarm horns, flashing lights, etc., as shown in the simplified diagram.

#### General Description

##### Electrical

The A1000 and B1000 Series annunciators are completely wired and tested before shipment. They contain twelve point modules which are connected via cable harnesses to the input and output terminal strips. The units are designed to operate reliably within a range of -25% to +15% of the rated power supply voltage.



Power consumption is a low 3 watts per point in the alarm or test state; no power is consumed in the normal state. Point modules have a nominal response time of two milliseconds, to eliminate false alarms due to transients.

##### Mechanical

Series A1000 and B1000 annunciators are compact units designed for rear or flush mounting in any position. Enclosures are made of 16-gauge steel formed and welded. They are primed and painted inside and out with semi-gloss black enamel. The front panel is hinged at the bottom and has a cam-lock fastener at the top.

Legend plates for each point are a durable laminate on which legends are engraved in contrasting letters. You may engrave the legend plates, or we will engrave for a nominal charge.

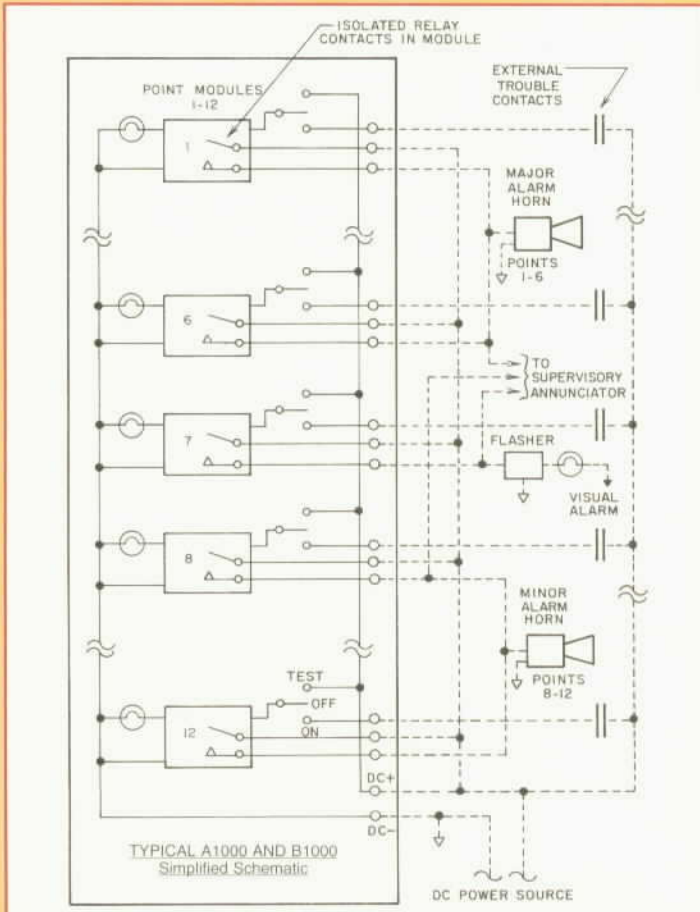
Legend plates are held securely in place by semi-permanent pressure-sensitive adhesive. Plates may be removed and reapplied several times and still adhere securely.

Lamps are long-life miniature switchboard type with a slide base. They are covered with lens caps, and may be replaced from the front of the panel without the need of special tools. The terminal strips are barrier type with plated No. 8 binding screws. Three strips are provided for external wiring connections; all terminals are clearly marked for accurate identification. Conduit knockouts for external wiring are provided at the top and bottom of the enclosure.



## Operation General

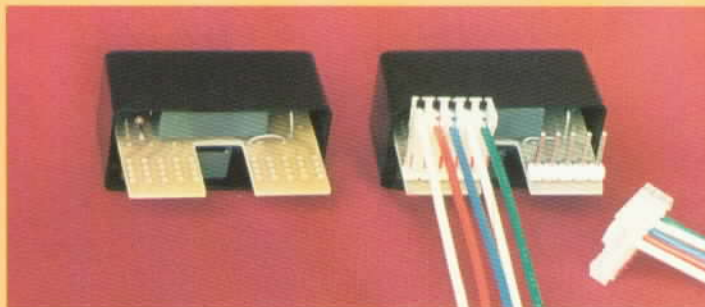
A1000 and B1000 Series annunciators can monitor twelve sets of external contacts. Each annunciating point includes a lamp for visual identification, and relay(s) for external alarm control. Different models have different sequences and various relay options.



## Point Modules

The point modules are wired-in (A1000) or plug-in (B1000) packages of the latest design. One or two alarm control relays are contained within each point module. When the external trouble contacts close, the point module enables its annunciating lamp to turn on and its relay(s) to operate.

Relays in the point modules may be normally open, normally closed, or combinations of both. The relays may be used to control any combination of local visual, local audible, remote visual, and remote audible alarms, as well as points on control room annunciators.



A1000 Wired In Module

B1000 Plug-In Module  
Shown w/Connector

## Control Switch

The A1000 and B1000 Series annunciators contain twelve individual control switches, one for each monitoring point. Each is a three-position switch which controls the following functions:

**ON** – The control switch must be placed in the ON position for normal operations. In this position, the point module is in the alert-ready state.

**RESET/OFF** – Generally, the control switch is placed in the RESET position in order to clear the point module and ready it for the next trouble input. Some models use the RESET function to return the relay contact to normal without turning off the annunciating lamp. This allows a potentially annoying alarm to be turned off after it has performed its alerting function.

**TEST** – Each point is tested individually by moving the switch to the TEST position. This position gives a complete check of the entire point module circuit. If an alarm occurs while the switch is in the TEST position, the lamp will remain on when the switch is returned ON.

## Sequences

All models in the A1000 and B1000 Series are pre-wired to provide a “lock-on” operating sequence. The wiring for each point can be easily changed in the field to provide a “follow-the-contact” sequence. These sequences are described as follows:

**“Lock On”** – the lamp lights when the trouble contact operates. The lamp will stay on until the trouble is cleared and the annunciating point is RESET.

**“Follow-The-Contact”** – the lamp lights when the trouble contact operates, and will turn off when the trouble contact returns to its normal state.

Any of the twelve points can be set up with either sequence. They may be mixed in any order in the annunciator.

All 1000 and B1000 Series annunciators are factory wired for the “lock on” sequence. To change this to “follow-the-contact,” simply disconnect the green wire from the point module, at its terminal point.

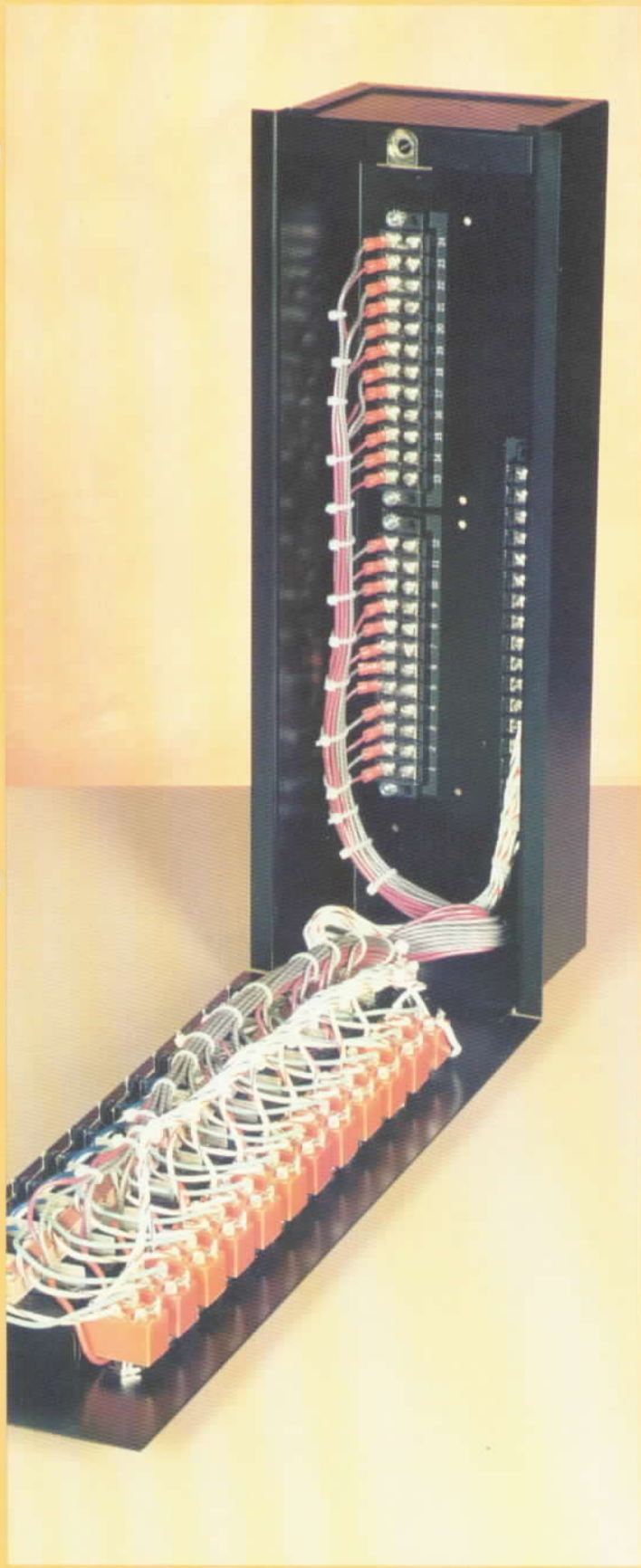
## Installation and Maintenance

Series A1000 and B1000 annunciators are designed for rear or flush mounting near the equipment to be monitored. For wall mounting, drill holes on appropriate centers and mount with screws or bolts. For flush mounting, panel cutout dimensions are given in the annunciator manual. The annunciator is secured in the panel with four J-bolts which are supplied.

Conduit knockouts are provided at the top and bottom for external wiring to integral terminal barriers. Optional feed-through rear mounted terminal barriers are available and need to be specified as “feed-through” at the time of order. If feed-through terminals are provided, the unit can only be flush mounted.

Maintenance is minimal and should include periodic testing of the modules and lamps, using the TEST function for each point. Replacement of modules is simple and fast. The A1000 point modules will require re-soldering for replacement, whereas the B1000 point modules can simply be un-plugged and a new module re-inserted into place.





**A1000 Series Interior** — The upper "fixed" section (either flush-or rear-mounted) contains barrier terminal strips for all user connections — field contacts, auxiliary relays and input power. The lower "front panel" section, hinged at the bottom for complete access, contains switches, lamps and point modules.

## General Specifications

(Subject to change without notice)

### Mechanical

Size, H X W X D	17-3/8 x 5-1/4 x 4 (44 x 13 x 10 cm).
Weight	12 pounds, approximate shipping weight. (5.5 kg)
Finish	Semi-gloss black, baked enamel.
Conduit access	Knock-outs top and bottom for 1" conduit fitting.
Enclosure	16-gauge steel

### Electrical

Number of points	12 (fully equipped)
Relay contacts	15 VA resistive, 1.5 amps max., 350 V dc breakdown, isolated from internal wiring.
Input voltage choices	12 V dc nominal (10.8 V to 14.2 V dc). 24 V dc nominal (10 to 27 V dc). 48 V dc nominal (35 to 56 V dc). 125 V dc nominal (90 to 140 V dc). 250 V dc nominal (220 to 260 V dc).
Input power	Less than 3 watts per point in alert state. Maximum of 32 watts with all control switches in TEST position.
Lamps	Miniature slide-base, telephone type, 5000 hours MTBF
Input termination	One 16-point barrier-type terminal block, #8 screws
Output termination	Two 12-point barrier-type terminal blocks, #8 screws
Response time	Two milliseconds, any annunciating point..
Temperature range	0°F to 140°F (-18°C to + 60°C)

### How To Order

For each annunciator ordered:

1. Specify Model number. See next page for selections. A1000 Series have wired-in modules; B1000 Series have plug-in modules.
2. Specify supply voltage: 12Vdc, 24Vdc, 48Vdc, or 125Vdc. For 117VAC, 220VAC or 250VDC, an optional external power supply will be required. Consult factory for details.
3. If required, specify "feed-through" rear terminals.
4. Specify engraving if Seekirk is to supply.
5. Specify spare parts (Point Modules; Lamps).
6. Indicate desired number of instruction manuals. (One is included with each unit ordered.)
7. Amber lens caps will be supplied, unless otherwise specified. Standard colors available are amber, red, blue, green and white.

### Special Models

Special models are available to meet specific needs. Consult the factory for further information.



## Models and Selection

There are currently 40 standard models available in the A1000 and B1000 Series. Select the model for your requirement by"

1. Annunciating Sequence desired, and
2. Configuration of the isolated auxiliary relay(s) desired.

## Sequences

The annunciating sequences available are defined by four groups of two basic model numbers, A1001 or B1001, A1002 or B1002, A1002R/O, and A1003 or B1003. They are described as follows; also refer to Sequence Chart.

**Models A1001 and B1001** are designed to provide assurance that an alarm will not be lost. With the control switch in the ON Position, the lamp and the auxiliary output contacts will "lock on." In the RESET/OFF position they will "follow the contact" (i.e., the input field contacts). A sequence change can be obtained by disconnecting the green wire at the point module. This will cause the lamp and aux. relay contacts to "follow the contact" with the control switch in the ON or RESET/OFF position.

**Models A1002 and B1002** are designed to provide the ability to deactivate an alarm point. With the control switch in the ON position the lamp and the aux. contact will "lock on". In the RESET/OFF position neither will operate. A sequence change can be performed by disconnecting the green point module wire at the point module. This will cause the lamp and the relay to "follow the contact".

**Model A1002R/O and B1002R/O** are identical to Models A1002 and B1002 except that the lamp and aux. relay operate independently. With the control switch in the ON position the

lamp and the relay will "lock on". In the RESET/OFF position the lamp will "follow the contact" and the aux. relay will be de-energized.

A sequence change can be performed by disconnecting the green point module wire. With the control switch in the ON position both the lamp and the aux. relay will "follow the contact". For the RESET/OFF position sequence is unchanged; only the lamp will "follow the contact" and the relay will be de-activated.

**Model A1003 and B1003** have two sequences available. Both sequences utilize lamp memory; that is, the alerted lamp will always "lock on" until the alarm has cleared and the monitoring point is RESET.

With the green point module wire connected, the aux. output relay contacts will also "lock on". Note; Not applicable to Models A1003A, B1003A, A1003B, B1003B, A1003C or B1003C; see Auxiliary Relay Configurations table.

With the green wire disconnected, the aux. relay will "follow the contact". It will clear when the field contact returns to normal.

Regardless of the sequence utilized, if the control switch is in the RESET/OFF position the point module will not respond to an alarm.

## Auxiliary Relay Configurations

The auxiliary relay(s) configuration to be supplied are determined by a suffix letter added to the basic model number, as shown in the Auxiliary Relay Configurations table. Note that if no suffix letter is added, only one N.O. aux. relay will be supplied. Except for special models, all 12 point modules will have the same relay configuration, and are designed for use with normaly-open field contacts.

### Sequence Chart, All Models

FIELD CONTACT STATUS	A1001 or B1001, A,B,C,D				A1002 or B1002, A,B,C,D				A1002 R/O or B1002R/O, A,B,C,D				A1003 or B1003,A,B,C,D†			
	FOLLOW		LOCK ON		FOLLOW		LOCK ON		FOLLOW		LOCK ON		FOLLOW		LOCK ON	
	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY	LAMP	RELAY
NORMAL	OFF	D	OFF	D	OFF	D	OFF	D	OFF	D	OFF	D	OFF	D	OFF	D
ALARM	ON	E	ON	E	ON	E	ON	E	ON	E	ON	E	ON	E	ON	E
RET TO NORM	OFF	D	OFF	E	OFF	D	OFF	E	OFF	D	OFF	E	OFF	D	OFF	E
RESET 1*	ON	E	ON	E	OFF	D	OFF	D	ON	D	ON	D	ON	D	ON	E
RESET 2*	-	-	OFF	D	-	-	OFF	D	OFF	D	OFF	D	OFF	D	OFF	D

NOTES: 1. Relay status is either "D" (De-energized) or "E" (Energized)

\*2.Reset1 = reset after alarm, but before alarm status clears.

Reset2 = reset after alarm status clears.

†3. A1003A, B1003A, A1003B, B1003B, A1003C, and B1003C are not available with Lock On Sequence.

### Auxiliary Relay Configurations All Point Modules

BASIC MODELS	A SUFFIX†	B SUFFIX†	C SUFFIX†	D SUFFIX
A1001 and B1001 A1002 and B1002 A1002R/O and B1002R/O A1003 and B1003	A1001A and B1001A A1002A and B1002A A1002R/O-A and B1002R/O-A A1003A* and B1003A*	A1001B and B1001B A1002B and B1002B A1002R/O-B and B1002R/O-B A1003B* and B1003B*	A1001C and B1001C A1002C and B1002C A1002R/O-C and B1002R/O-C A1003C* and B1003C*	A1001D and B1001D A1002D and B1002D A1002R/O-D and B1002R/O-D A1003D and B1003D

Note: All contacts shown de-energized.

\*Operates only in "Follow the contact" sequence (control switch "ON").

†Dual contact sets are independent relays which operate simultaneously.

# SEEKIRK

Seekirk, Inc.  
2420 Scioto-Harper Road  
Columbus, Ohio 43204  
Fax: 614-278-9257

Represented By:

Telephone: 614-278-9200