2-Zone Remote Alarm (ARA) User's Manual

onset®

The Remote Alarm is a battery-powered remote alarm device with audio and visual alarm indications. The Remote Alarm is compatible with alarm outputs having passive relay contacts.

> IMPORTANT INSTRUCTIONS FOR USE: THE REMOTE ALARM IS NOT INTENDED FOR AND SHOULD NOT BE USED IN APPLICATIONS INVOLVING LIFE THREATENING OR LIFE SUPPORT SITUATIONS.
>
> The ARA Remote Alarm does not operate without working batteries. Alarm function will not work if the batteries are removed from the unit, or if the batteries fail. Please check the batteries and test the alarm function regularly. Although the ARA and all its parts have passed all factory tests and are designed to be as reliable as possible, any of these parts could fail at any time.

2-Zone Remote Alarm (ARA)

Included Items:

- 4 mounting screws
- 1-inch connecting wire
- 3 AAA batteries
- blank labels

Specifications

Number of Inputs	2
Alarm Output Compatibility	Normally Closed (NC) or Normally Open (NO) passive relay outputs, with contacts rated for a minimum 5 volts DC and 5 microamps
Input Wire	20 to 30 AWG, solid or stranded
Audible Alarm Level (Jumper Select)	Loud: 92 dBA @ 30 cm Soft: 78 dBA @ 30 cm
Operating Temperature Range	-20° to 50°C (-4° to 122°F)
Operating Humidity Range	0 to 95% RH, non-condensing
Batteries	3 AAA, user replaceable
Battery Life	Normal operation: 1 year; Alarm condition: 3 days
Size	111.8 x 83.9 x 40.7 mm (4.4 x 3.3 x 1.6 inches)
Weight	168 g (5.9 oz) with batteries
Shock Resistance	6-foot drop
CE	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

Setup and NO/NC Configuration

The Remote Alarm requires three AAA alkaline batteries for operation (batteries included). **Before installing the batteries, the Normally Open/Normally Closed (NO/NC) jumper must be in the correct position.**

The NO/NC jumper configuration is only checked when the batteries are installed. If the jumper setting requires changing, the batteries should be removed then reinstalled after the change.

Remove the four screws in the back of the case with a Phillips-head screw driver. There is a jumper strip labeled NO (Normally Open) and NC (Normally Closed) near the top of the board (see Figure 1). The jumper is in the NC position when shipped from the factory. Put the jumper in the position corresponding to the alarm output characteristics of the device to which the Remote Alarm will be connected. Normally Open operation is used with alarm contacts that are normally open and closed in alarm conditions. Conversely, Normally Closed operation is used with alarm contacts that are normally closed and open in alarm conditions. The jumper setting applies to both zones; they are not individually selectable.
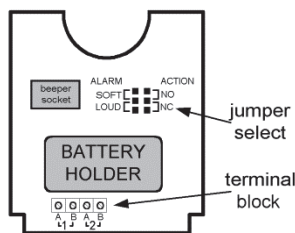

Figure 1

Audio Beeper Volume

The beeper volume can be adjusted by moving the jumper on the jumper strip labeled LOUD and SOFT (see Figure 1). The jumper is in the loud position when shipped from the factory. If no beeper indication is desired, the connector plug attaching the beeper to the circuit board may be disconnected.

Zone Connection

Using a small (jeweler's) regular flat head screwdriver, loosen the screws for the desired zones on the screw terminal block and insert the interconnect wires. Then tighten the screws until a moderate tug does not pull the wires loose.

If you are using only one zone and are in the Normally Closed (NC) mode, a jumper wire must be installed into the unused channel; otherwise that zone indicator will always be flashing and will significantly diminish the expected battery life.

Connecting Multiple Logger Alarm Outputs into a Single Zone Input

You can connect multiple logger alarm outputs into one zone input as long as they are all of the same type (NO or NC) and are connected properly. The connections depend on whether the devices are NO or NC.
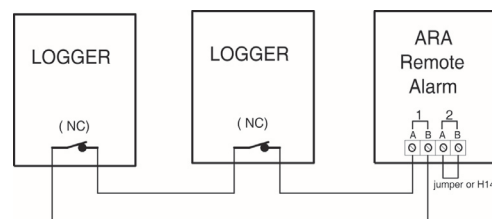

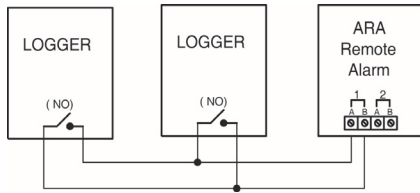**Figure 2: Normally Closed (NC) multiple logger configuration**

Figure 3: Normally Open (NO) multiple logger configuration

2-Zone Operation

If you are configuring the system for alarms in two zones, both zones must be of the same type (NC or NO).
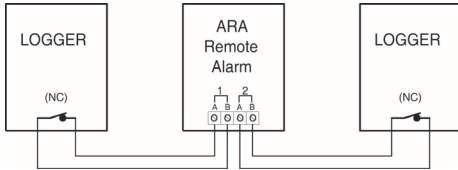

Figure 4: 2-zone logger inputs in NC configuration

Connecting Multiple Remote Alarms to One Logger Alarm output

Up to two Remote Alarms may be connected to a single logger alarm output as shown below. A total of 1000 feet of wire maximum (30 AWG minimum) may be used to interconnect the Remote Alarm(s).
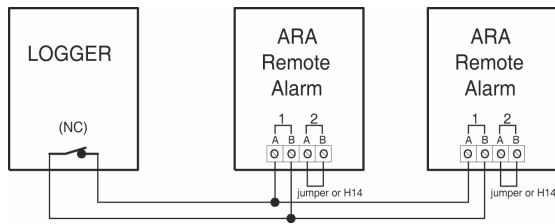

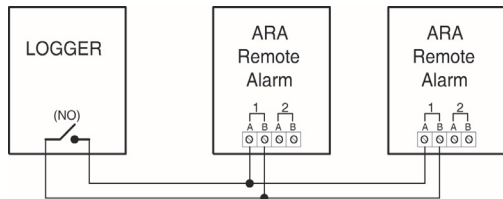**Figure 5: NC multiple Remote Alarm configuration**

Figure 6: NO multiple Remote Alarm configuration

It is imperative that the A side of the terminal block be connected to the A side in multiple Remote Alarm hook-ups (and B side to B side). Failure to do this will cause the remote alarm units to malfunction. If the Remote Alarm is used with the AVD-45 AutoDialer, then be certain the white and yellow wires are connected as shown below. The AVD-45 AutoDialer requires a Normally Closed relay setting for the logger and/or Remote Alarm (see AVD-45 manual).
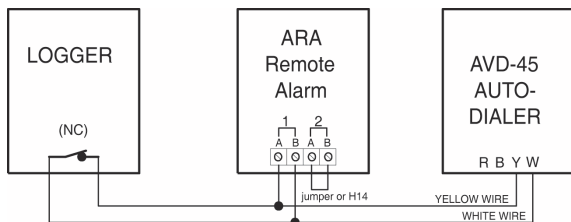

Figure 7: NC Remote Alarm/Logger/AutoDialer configuration

Battery Installation and Test

After the jumpers have been set and the zone inputs connected, the batteries can be installed in the battery holder. Please note the proper directions of the batteries as indicated in the holder. As the batteries are installed, the alarm will beep three times and the Zone LEDs and the RED battery status LED will flash three times.

Reassemble Case

Once the jumpers are set and the interconnect wires and batteries are installed, the back should be attached to the case with the four screws.

Remote Alarm Wall Mount Instructions

1. Slide down wall mount bracket from rear of case to remove.
2. With countersunk holes facing you, position bracket in desired location and attach with (4) flat head screws provided. If attaching to a surface harder than drywall, it is recommended that you drill (4) small pilot holes first.
3. To attach Remote Alarm, slide it down onto the wall-mounted bracket.

Remote Alarm Testing

In order to test the ARA's audio and visual indicators, press and hold the MUTE/TEST button for one second. All three LEDs should flash red three times as the audio indicator beeps three times. This operation, however, does not test the ARA's alarm signal detection circuitry. To test the detection circuit, disconnect the alarm input wires. If the ARA is configured as Normally Closed, this will set off the alarm. If the ARA is configured as Normally Open, manually shunt (jumper) the inputs (1A to 1B and 2A to 2B) and the alarm will be set off. If the ARA fails this test, contact Onset Computer or an Onset authorized dealer.

More extensive system testing may be possible by simulating an alarm condition at the monitoring unit which would initiate an alarm. For additional information, refer to the manual for the monitoring unit.

Operating and Battery Status

The battery-powered Remote Alarm shows its current operating and battery status with a bi-color LED. This LED, when flashing green, indicates normal operation and good batteries. When it is flashing red, and the beeper is chirping, the unit is still operating, but the batteries require replacement. If the LED is not flashing at all, the batteries are dead and the unit is not operating. As long as the LED is flashing green, the batteries still have enough capacity to signal an alarm condition continuously for at least three days.

The Remote Alarm requires three AAA batteries. Use only fresh alkaline batteries. Batteries can be changed without disconnecting the alarm wires. See the Battery Installation and Test section for instructions.

Alarm Indications

If the Remote Alarm detects an alarm condition, the LED(s) for the appropriate zone(s) will flash and the beeper will sound simultaneously for about 0.5 seconds on and 1.5 seconds off.

Beeper Mute

If, during an alarm or low-battery condition, it is desired to mute the beeper, press the mute/test button for one second and the beeper will be silenced. If the alarm signal is removed, the audio indicator is automatically reset and will sound again on the next alarm condition. *The mute function will also automatically reset approximately fifteen minutes after the mute button was last pushed or immediately if a new alarm condition has been detected.*

The zone alarm LED(s) are not affected by the mute button and will continue to flash during an alarm.

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