

# No. 1023 ALARM PROCESSING CENTER

## GENERAL INFORMATION:

The No. 1023 Alarm Processing Center is a "3 zone plus panic circuit" local alarm panel with the following features:

Two Supervised Basic Protection Zones for Normal and Fast Acting Perimeter and Interior Devices (two wire circuit with end-of-line resistor).

Automatic Zone Shunting with audible warning from optional sounder (permits closing even with one or both basic protection zones inoperative).

Entry/Exit Zone with 45 (or 30) Second Entry and Exit Delay Times. Supervised. Entry delay may be eliminated via a remote switch.

24 Hour Emergency (Panic) Circuit.

LED Indication of AC Power, Zone Status and Alarm Memory by Zone (indicates alarm has taken place and bell has timed off).

Outputs for Bell(s) or high volume from Electronic Siren, Closure of Dry Contacts and (Optional) Early Warning Horn.

Automatic Alarm Cut-Off after 12 (or 8, 16 or 24) minutes and Restore on All Intact Loops (will report a second alarm).

Bell and Battery Test Switch.

Includes Low Voltage Plug-in Transformer and Built-in Rechargeable Power Supply (can supply 6V. continuous auxiliary load up to 350 ma and 12V. unregulated power that can provide high volume sound from an electronic siren. Battery is reserved for standby power and not used for normal load with AC present.

System Turned ON and OFF from a Keyswitch (e.g.: No. 4235).

Remote Station(s) may be used instead, via an Adapter (e.g.: Nos. 244, 245, 216, 228 or 5241).

## INSTALLATION AND WIRING:

Do not connect the battery or plug-in transformer until all other wiring has been completed.

See Figure 1.

### Terminals:

1,2 (Zone 1)  
3,4 (Zone 2)

Basic Protection Zones 1 & 2: For each zone, run a pair of wires from that zone's terminals to all protection points in the zone and terminate with a 1000 ohm End-of-Line Resistor (supplied). Each loop has normal response to closed circuit devices (such as magnetic contacts, foil, etc.) connected in series. In Zone 1, for fast response to quick acting devices (such as vibration contacts and photoelectric units without built-in delays), cut the yellow jumper wire on the unit's chassis. (Zone 2: Cut the red wire for fast response.)

An open or short in either loop will cause an immediate alarm when the system is ON.

Devices with open circuit contacts (such as mats) may be connected between the wires of either loop. (Do not use an Ademco No. 602 Mat Coupler.)

Maximum permissible resistance in each loop: 300 ohms (plus the 1000 ohm End-of-Line Resistor).

5,6

Entry/Exit Zone: Connect closed circuit contacts on the entry/exit door as well as interior contacts or sensors located in the path between the exit door and the control in a series wiring loop across these terminals. Maximum permissible loop resistance: 300 ohms.

This zone provides entry and exit times of 45 seconds each (30 seconds if the WHITE jumper is cut per Fig. 1).

**ALL INTERCONNECTIONS MUST BE MADE USING UL LISTED LIMITED ENERGY CABLE.**  
FOR COMPLETE INSTALLATION AND OPERATION INSTRUCTIONS, SEE TEXT.

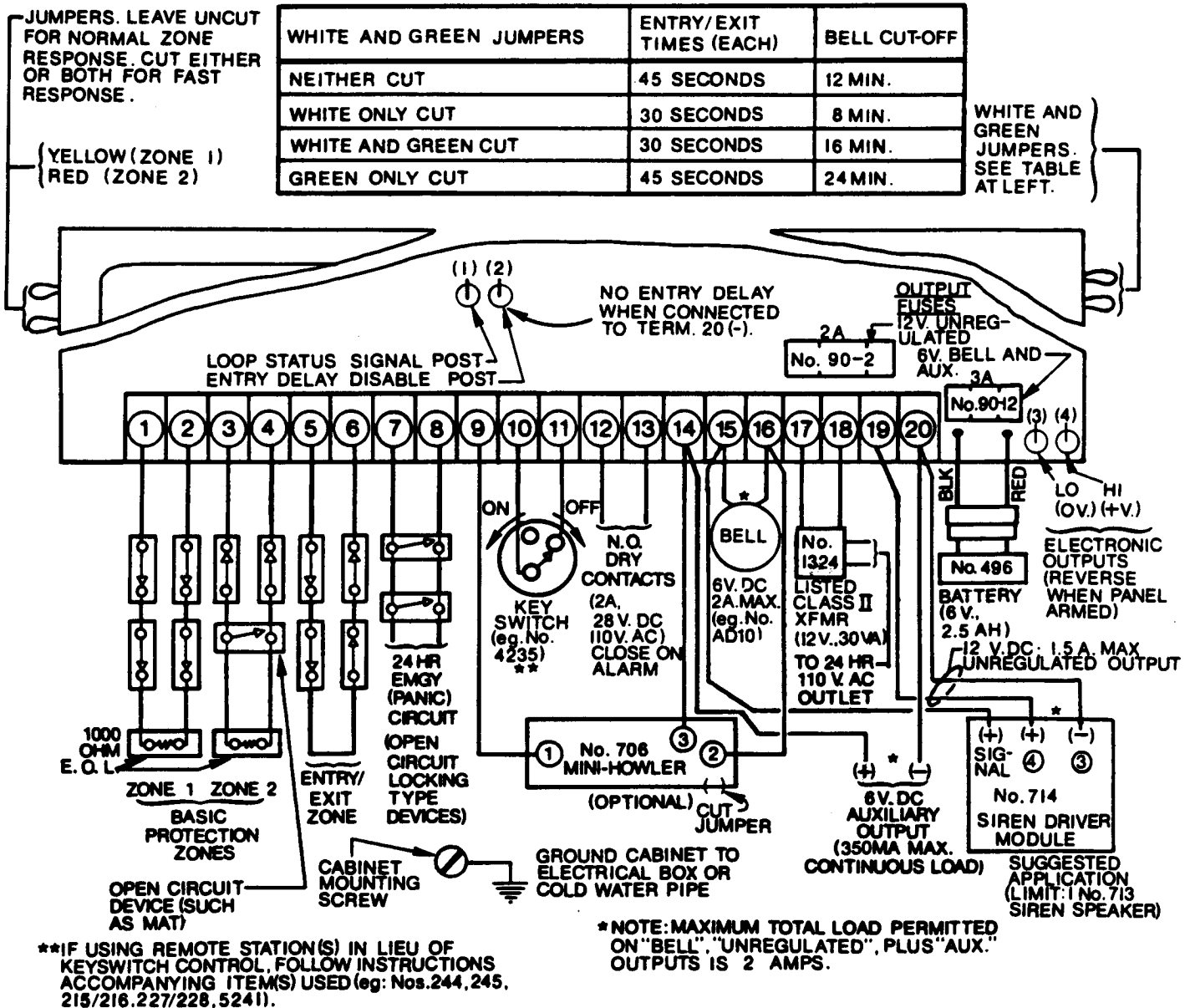


FIGURE 1: Field Connections

- 7,8      Emergency (Panic) Switches: Connect locking type open circuit emergency switches (such as Nos. 264, 266, 268 or 269) in parallel across these terminals.
- Operation of an emergency switch at any time (system OFF or ON) will cause the alarm bell(s) to ring and the output contacts to close. Alarms activated from emergency switches do not cut off until the switches are reset.
- 9,14(+),16(-)      No. 706 Mini-Howler (Optional): Connect as shown in Fig. 1.
- Will sound during entry delay.
- Will also give steady warning during exit delay in case of accidental closing with entry/exit zone open or an intermittent tone if a basic protection zone is faulted and being automatically shunted.
- 10,11      Keyswitch: Connect a keyswitch, with key removable in "make" and "break" positions (such as No. 4235), across these terminals (OFF position: Contacts CLOSED, ON position: Contacts OPEN). A knockout is provided on the cover of the No. 1023 for panel mounting. CAUTION: The switch may be located remotely provided the panel LEDs can be seen when the system is turned ON or OFF. Otherwise, chances of unknowingly closing with protection not properly set are increased unless the optional No. 706 is installed.
- Instead, remote station(s) showing system status may be used via an adapter (e.g.: Nos. 244, 245, 216, 228 or 5241).
- 12,13      N.O. Dry Contacts: These contacts may be used to trip a digital communicator, telephone dialer or as desired. The contacts close on alarm (burglary or emergency) and open upon bell cut-off (burglary) or when emergency (panic) switches are manually reset. (The contacts do not close during bell test.)
- 14,(+), 20(-)      6V. D.C. for Auxilliary Equipment: Up to 350 ma continuous load can be connected to these terminals for powering units such as Nos. 1325-6, 1327-6 or 1355-6 Photoelectric Systems or Nos. 450-6 or 454-6 Ultrasonic Motion Detectors. During alarm, up to 2 amperes total combined load may be supplied by these, the alarm bell terminals 15 and 16 and the unregulated output terminals 19 and 20.
- 15(+),16(-)      6V. DC. Bells having a combined total rating of 2 amperes (less any auxiliary load connected to terminals 14 and 20, and 19 and 20) may be connected in parallel across these terminals.
- Except during an emergency (panic) alarm, cut-off occurs after approximately 12 (or 8, 16 or 24) minutes (the Alarm Memory LED remains lit). After cut-off, the system will re-alarm if a disturbance subsequently occurs in any intact protection zone (including the originally disturbed zone if it has returned to normal).
- 17,18      Power Input, 12V. AC: Connect these terminals to the output terminals of the No. 1324 Transformer. Do not plug in the transformer yet.

19(+),20(-)

12V. DC Unregulated Power Output (1.5 amperes maximum): A typical application for these terminals is to supply 12V. DC power (on alarm) to a No. 714 Siren Driver Module with one No. 713 Speaker to give high volume sound. (If AC input to the panel is not present, this output drops to 6V.)  
Note: During alarm, the total combined load on these terminals plus 14 and 20 plus 15 and 16 must not exceed 2 amps.

### Signal Posts

- (1) Loop Status Signal Post: Used with remote (arming/disarming) station accessories.
- (2) Entry Delay Disable Post: When this post is connected to terminal 20 (through a switch, if desired) a disturbance in the "delay" zone will result in an immediate alarm while the system is armed (such as might be desired in a residence at night). Exit delay is not affected. Without this connection, normal entry and exit delay is present.
- (3)LO (Zero V.) Electronic Output Signal Posts: These posts can be used to control accessories and/or provide opening and closing signals to a digital communicator. The levels indicated are present when the control is disarmed. The levels reverse when the control is armed.
- (4)HI (+V.)

Ground

Ground the cabinet to an electrical box or cold water pipe.

Black and Red  
Leads with Molex  
Connector

Standby Battery: After all other wiring is completed, and with the keyswitch OFF, connect the battery to this plug when ready to proceed with TESTING AND CHECKOUT.

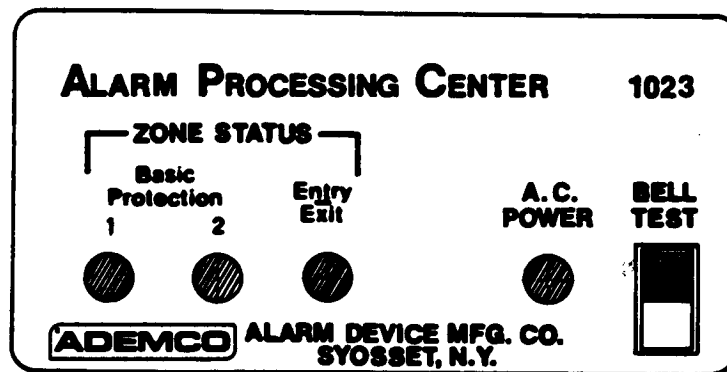


FIGURE 2: Indicators

### TESTING AND CHECKOUT:

Perform these tests after the wiring and connections described in the previous section have been completed.

See Figure 2.

The keyswitch should be OFF. Turn it ON and OFF again.

1. Plug the transformer into a 115V.AC outlet that is ON 24 hours a day. The AC Power LED should light.

2. Observe the Zone Status LED's. None will be lit if the protective loops are properly wired and all contacts are properly set.
3. When all Zone Status LED's are out, do the following and observe the appropriate LED light in each case:
  - a. Open the zone 1 loop momentarily. The zone 1 LED should light while the loop is open. Repeat for zone 2 loop and LED.
  - b. Short the zone 1 loop momentarily. The zone 1 LED should light while the loop is shorted. Repeat for zone 2 loop and LED.
  - c. Open the entry/exit loop momentarily. The entry/exit zone LED should light while the loop is open.
4. Test the Bell(s) (and/or Electronic Siren) and Standby Battery by depressing the Bell Test Switch momentarily. The bell(s) should ring while the switch is depressed.  
  
 Note: The battery may not be fully charged. If this test is tried with a low battery there will not be enough power to ring the bell. Let the unit charge (transformer plugged in) for at least one half hour if the battery is low.
5. Test the Emergency (Panic) Circuit by momentarily shorting terminals 7 and 8 or tripping an emergency switch. The bell(s) should ring only as long as the short remains.
6. Turn the system ON and simulate leaving the premises by following the procedure given in the OPERATION section.
7. Simulate entering the premises and turn the system OFF by following the procedure given in the OPERATION section.

## OPERATION:

### When Turning System ON:

1. AC Power LED should be lit at all times. If out, AC failure to unit is indicated.
2. Zone Status LED's should be off. If lit, protective loop is not set properly.

**IMPORTANT:** If either (or both) of the Basic Zone Status LED's is (are) lit, the control can be turned ON and the faulted zone(s) will automatically be shunted out and not cause an alarm although the No. 706 Mini-Howler (if installed) will give an intermittent tone during the exit delay time. If a faulted zone restores, however, a subsequent disturbance in its loop will cause an alarm. If the Entry/Exit Zone Status LED is lit, turning the control ON will cause an alarm, after 90 (60) seconds (exit plus entry delay time). In this case, the No. 706 Mini-Howler (if installed) will sound a steady warning immediately that an alarm can be avoided if the keyswitch is returned to OFF before 90 (60) seconds have expired.

3. Depress Bell Test Switch to test bell and standby battery.
4. Turn Keyswitch ON to arm system. Leave via entry/exit door within 45 (30) seconds.

### When Turning System OFF:

1. Enter only through entry/exit door. If a No. 706 Mini-Howler has been installed it will sound during the entry delay period.

2. Turn Keyswitch OFF before end of entry delay period.

Note: The Zone Status LED's on the No. 1023 will go on and off as the protective loops open and close during normal operation of doors, windows, etc., while the system is OFF.

3. Note if an LED on panel is lit (it will be flashing if an alarm has taken place and the zone restored or on continuously if the zone is still open). To reset, turn the control ON and OFF again.

## ACCESSORIES:

Instead of using a keyswitch to control the panel, up to 4 remote stations (e.g.: Nos. 214, 231, 246, 246R, 5231 or 5246) may be used via one of the following adapters (each remote station shows system status via a single LED):

No. 244 Two Wire Remote Adapter

No. 245 Two Wire Remote Adapter Module with Supervised Fire Loop

Alternatively, the following are available for coded pushbutton control of the panel:

No. 215 Two Wire Digital Remote Station with Panic Circuitry (up to 4 can be used, via a No. 216 Adapter)

or

No. 227 Single Button Digital Remote Station (up to 5 can be used, via a No. 228 Adapter)

or

No. 5241 Self-contained Digital Remote Station (only one can be used...no adapter needed)

Complete information is contained in the individual installation instructions for the above.

Other accessories may be used if they do not draw more than 350 ma continuous current (at 6V. DC) from terminals 14 (+) and 20 (-). Total current on alarm (including alarm sounding device plus unregulated output) should not exceed 2 amperes.

## SPECIFICATIONS:

Physical:	Width:	8"	(20.3 cm)
	Height:	15"	(38.1 cm)
	Depth:	3"	( 7.6 cm)

Electrical:	Voltage:	12 V.AC (From No. 1324 Plug-in Transformer)
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Current (per loop):	4 ma
Maximum Resistance (per loop):	300 ohms
Auxiliary plus Unregulated plus Bell Circuit Outputs:	2 A maximum
Fuse, 6V.DC (Auxiliary plus Bell) Outputs:	3 A (No. 90-12)
Fuse, 12V. DC (Unregulated) Output:	2 A (No. 90-2)
Output Relay Contacts:	SPST, Rating: 2 A at 28V. DC/110V. AC
Standby:	3 cell Sealed Lead Acid Rechargeable Battery (Ademco No. 496). Over 60 hours standby with no accessories. Standby with accessories depends on continuous load supplied.