



INSTALLATION INSTRUCTIONS

No. 979

ICS CONTROL INTERFACE

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GENERAL INFORMATION:

The following discussion assumes familiarity with the Inertia Crossbar System (ICS) and its functions. For those not fully acquainted with the system's operation, reading the applicable ICS Installation Instructions is recommended.

When used with the Inertia Crossbar System and the system's Burglar Alarm Control, the No. 979 is capable of automatically initializing the ICS. The No. 979 eliminates the need for manually resetting the system components prior to arming the control. The No. 979 reports ICS system alarms to the control panel and provides a warning if there is a system fault during arming.

DESCRIPTION:

With the No. 979 installed, arming the Burglar Alarm Control will cause the No. 979 to electronically reset all Analyzers and Monitors in the Inertia Crossbar System.

If any Analyzer or Monitor connected to the system is permanently faulted in alarm when the Burglar Alarm Control is armed, the No. 979 does not report an alarm immediately, but instead produces a voltage output signal at its BUZZER OUT terminal. This output, which lasts approximately 10 seconds, can be used to drive the buzzer terminal on Controls so equipped. The buzzer should be so located that its sound is audible to the subscriber when he arms the system.

If the Burglar Alarm Control is disarmed during this 10 second warning period, no alarm is reported by the No. 979. The subscriber must then correct the cause of the fault before the system can be re-armed. If the user ignores the buzzer and fails to disarm the Burglar control within the 10 second period, the No. 979 reports an alarm to the Burglar Alarm Control.

INSTALLATION AND WIRING:

The No. 979 is installed within the System control panel. After the unit is mounted in place, the wiring connections are made. Preliminary considerations, terminal and "cut jumper" functions and installation and wiring procedures are given below.

Preliminary Considerations:

Use of the No. 979 in a burglar alarm system requires that the arm/disarm status of the system be known by the No. 979. This information is sent via a control lead from the control panel. A signal of either polarity may represent the system status. Depending on the polarity chosen, it may be necessary to cut a jumper on the No. 979. This is explained in the "Cut Jumper" paragraph below.

Installation:

Clip the No. 979 on any convenient edge in the control panel cabinet. (See Diagram 1).

Wiring:

Before installing wiring for No. 979, disconnect AC and battery from control panel.

1. Connect the control voltage lead, from the particular control panel being used, as shown in Diagram 2.
2. Make remaining connections as shown in Diagram 3.

Terminal Functions (See Diagram 3):

Terminal 1	System Arm/Disarm Status Control Signal Input
Terminal 2	Buzzer output that warns user at arming time that monitor or analyzer is in permanent alarm status.
Terminal 3(-) & 4(+)	Switched DC power output to all monitors and analyzers in the IC System. The No. 979 control interface interrupts this voltage to reset the monitors and analyzers.
Terminals 5(+) & 6(-)	Receive 6-14V DC power input from system control panel.
Terminals 7 & 8	Normally closed relay contacts for connection to Burglar Alarm Control's protective loop (open when ICS is in alarm)
Terminal 9	Alarm Status input to No. 979 from monitor or analyzer. Informs No. 979 of disturbance or fault in sensor loop. Connected to alarm relay terminal of monitor or analyzer.

"Cut Jumper Selector":

Polarity (WHITE) Jumper: Cut for positive "armed" control voltage. Leave intact for low "armed" control voltage.

INTERCONNECTIONS:

Diagram 3 shows the interconnection of various ICS components with Tamper connections omitted for simplicity. Tamper switches can be connected in a separate "Tamper Loop" or as a part of the Inertia Crossbar System loop described in the Installation Instructions accompanying each ICS Analyzer and Monitor.

The addition of the No. 979 Interface Module has no effect on the Tamper loop wiring in those cases where separate Tamper loop connections are used. When Tamper switch wiring is interconnected with other ICS components, the Tamper switches should be connected in series with the "+ IN" terminal at each ICS Monitor/Analyzer.

SYSTEM CHECKOUT:

The functions and operation of the No. 979 can be checked out in the manner described below. Since some of the procedures involve deliberately setting off an alarm, it is advisable to contact any central alarm station connected to the system and inform its personnel of your intentions.

1. **Make sure that the alarm system is ready for arming** and there are no disturbances near any of the system's sensors.
2. **Arm the Burglar Alarm system in the usual manner.** The warning buzzer, if employed, should be silent.
3. **Disarm the Burglar Alarm system** and proceed to disturb at least one ICS sensor. It should respond in the normal manner.
4. **Rearm the system.** After 10 seconds, disturb one of the sensors. The system should go into an immediate alarm.
5. **Disarm the Control.**
6. **Testing the No. 979 Buzzer and alarm outputs: Disconnect a sensor wire.** This should cause a constant state of disturbance. When the associated Monitor or Analyzer's LED lights steadily, indicating success of this attempt, arm the Burglar Alarm system. The buzzer, if connected, should sound for approximately 10 seconds, after which an alarm should occur. If the Control is disarmed before the buzzer turns off, no alarm takes place.
7. **Disarm the system.** The disturbed sensor and its associated Analyzer or Monitor should be evidenced, on latching type devices, by its illuminated LED. Correct the disturbance.
8. **Rearm and then disarm the system** to restore the No. 979 to its normal state.

WHAT TO TELL THE SUBSCRIBER:

Information pertaining to the use of the system should be properly conveyed to the customer in order to eliminate confusion and possible misunderstandings resulting in false alarms. In particular, the customer should know the following:

1. Arming the entire system is done via the Burglar Alarm Control's arming function. Successful arming is indicated by the absence of buzzer annunciation.
2. If any Monitor or Analyzer senses permanent fault at arming time, the system buzzer sounds for a prolonged period. The system must be disarmed within 10 seconds to prevent alarm reporting.
3. The disturbed sensor should be located by inspecting each sensor, monitor or analyzer for an LED indication.
4. When all disturbances are cleared, the system can be rearmed and the premises secured.

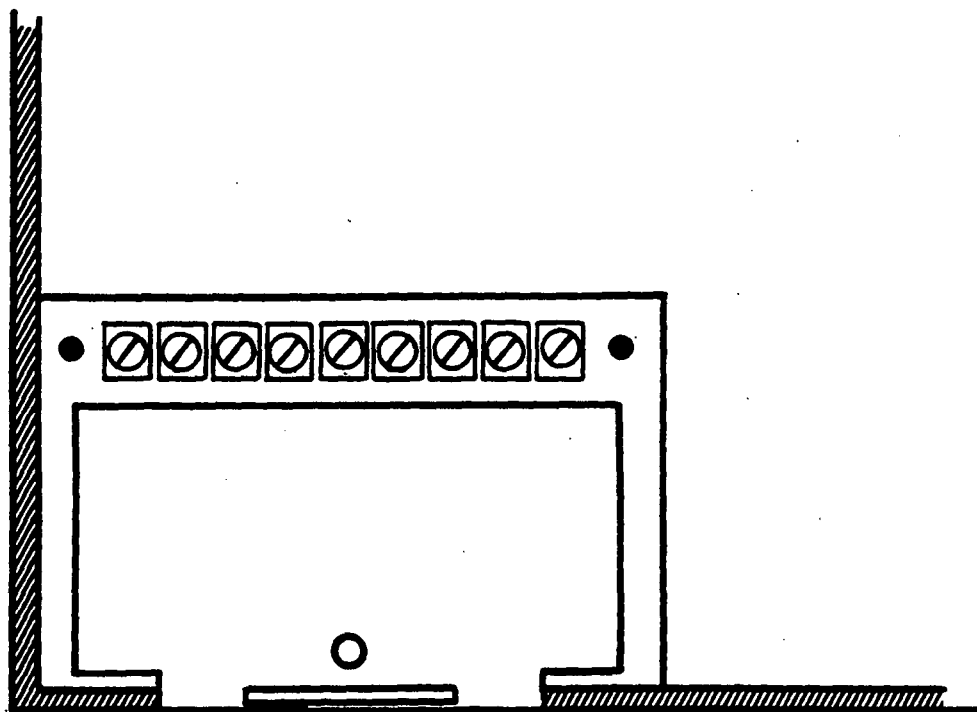
GENERAL SPECIFICATIONS:

Dimensions:

Width: 3" (7.6 cm)
Height: 2 $\frac{1}{8}$ " (5.4 cm)
Depth: $\frac{3}{4}$ " (1.9 cm)

Electrical:


- Input Voltage: +6 to +14V DC from an appropriate control.
Control Voltage: 0 or +6 to +12V DC (nominal). Either polarity can be used. If disarmed low is used cut WHITE jumper on No. 979.
Buzzer Output: 5 mA max. @ 5V DC.
Alarm Contacts: SPST 1A at 28V DC (max)
Input Current: 40mA plus current required for each monitor, analyzer and latching sensor. Current required by each of these units is specified in the applicable installation instructions.



CLIP ON EDGE OF PANEL


NO. 979 SHOWN MOUNTED INTO LOWER
LEFT CORNER OF CONTROL PANEL

Diagram 1: No. 979 INSTALLATION

ALARM PROCESSING CENTERS	
No. 1023	Nos. 1021 4021 (RESIDENTIAL)
PIN #3	
	U 16
9	U 14


NO. 979 POLARITY JUMPER MUST BE CUT

+ 6V WHILE ARMED
0V WHILE DISARMED

ALARM PROCESSING CENTERS	
No. 1023-12	Nos. 1021-12 4021-12 (RESIDENTIAL)
PIN #3	
	U 16
9	U 14

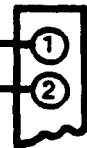
NO. 979 POLARITY JUMPER MUST BE CUT

+ 12V WHILE ARMED
0V WHILE DISARMED

ALARM PROCESSING CENTERS	COMBO BURGLAR FIRE CONTROLS	ALARM LOGI-CENTER
Nos. 1024 1025 1026	Nos. 332R 342R	4080-1
11	16  13	GRN FLYING LEAD
9	C	A 19

0V WHILE ARMED
+ 6V WHILE DISARMED

NO. 979



CONTROL IN
BUZZER OUT

ADD RESISTOR, ANY VALUE FROM 2K THRU 12K OHM, 1/2 W MIN.

ALARM PROCESSING CENTERS
Nos. 1025-12 1025EX-12
11
9

0V WHILE ARMED
+ 12V WHILE DISARMED

Diagram 2: BUZZER SIGNAL TERMINALS AND SOURCES OF CONTROL VOLTAGE

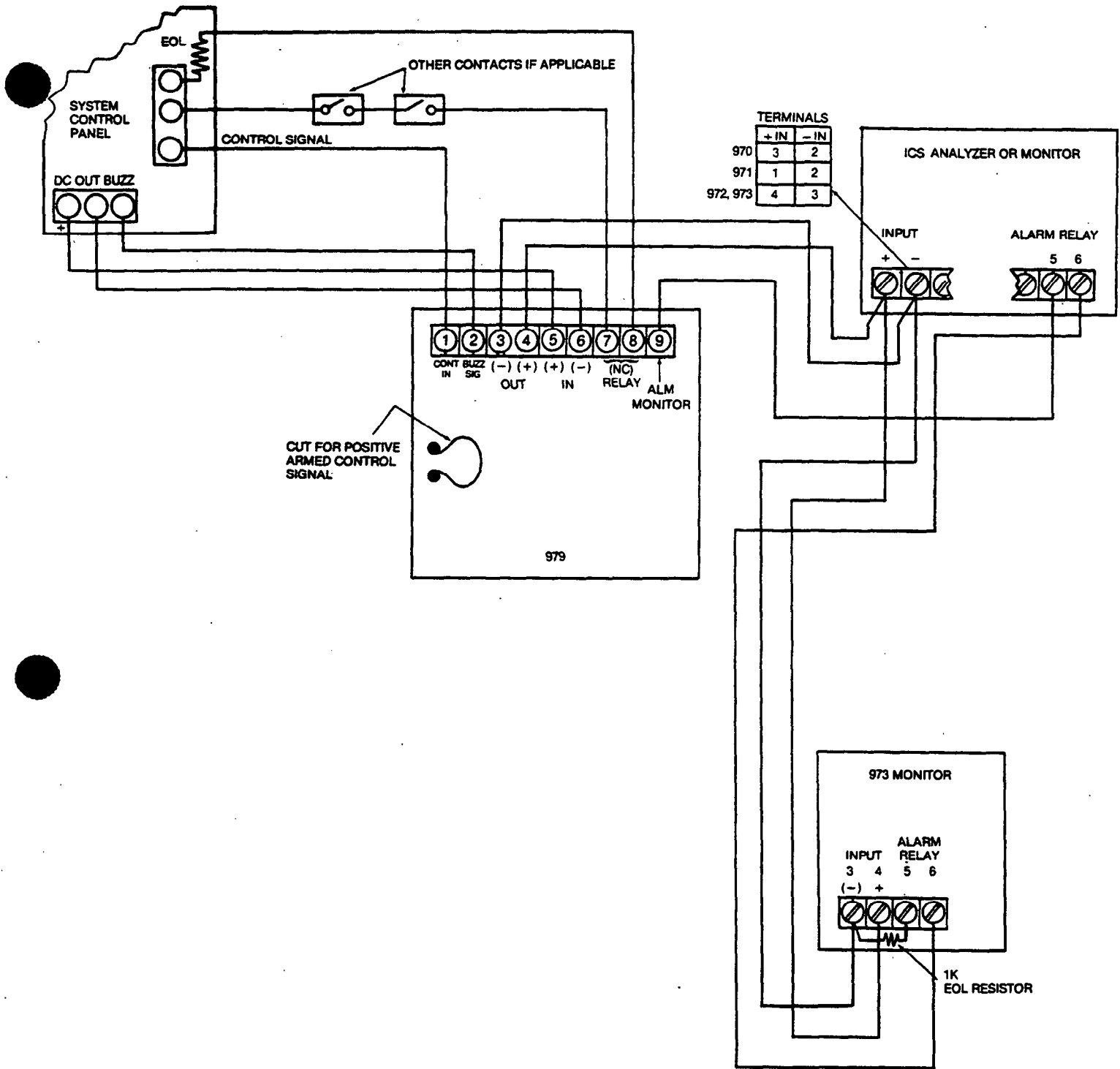


Diagram 3: WIRING INTERCONNECTION