

# EXAMINATION OUTLINE FOR ALARM COMPANY OPERATORS

August 2004

**I. Consultation (15%)** – This area assesses the candidate’s ability to provide recommendations about the installation and placement of alarm system components by consulting with the customer and taking into consideration local jurisdiction.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>Determine points of protection (e.g., doors, windows) to be included in the alarm system by consulting with customer.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of advantages and disadvantages associated with types of alarm systems.</li> <li>Knowledge of methods to assess customer’s needs and expectations regarding alarm systems.</li> <li>Knowledge of laws related to the limitations of types of electronic systems that can be installed by alarm company operators.</li> <li>Knowledge of factors that affect placement of perimeter detection devices.</li> <li>Knowledge of factors that affect placement of interior detection devices.</li> </ul>
<ul style="list-style-type: none"> <li>Evaluate feasibility of alarm system needs with customer to develop system plans and specifications.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of advantages and disadvantages associated with types of alarm systems.</li> <li>Knowledge of methods to assess customer’s needs and expectations regarding alarm systems.</li> <li>Knowledge of laws related to the limitations of types of electronic systems that can be installed by alarm company operators.</li> </ul>
<ul style="list-style-type: none"> <li>Ensure customer is in compliance with local ordinances by instructing customer to obtain alarm system permit(s) if required by the city/county.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of laws related to the limitations of types of electronic systems that can be installed by alarm company operators.</li> <li>Knowledge of permits required for alarm system installation.</li> <li>Knowledge of strategies to obtain information about laws regarding alarm system operation within customer’s jurisdiction.</li> </ul>
<ul style="list-style-type: none"> <li>Designate locations for alarm system controls to be installed by alarm company personnel by consulting with customer.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of advantages and disadvantages associated with types of alarm systems.</li> <li>Knowledge of methods to assess customer’s needs and expectations regarding alarm systems.</li> <li>Knowledge of factors that affect placement of alarm system keypad(s) and control equipment.</li> </ul>

**II. Installation (30%)** – This area assesses the candidate’s ability to install alarm systems according to codes and manufacturer’s specifications and educate customer about alarm system functioning.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Explain alarm system functions to educate customer about the operation of the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of effects of high speed Internet connection on alarm system communication transmission.</li> <li>• Knowledge of the operation of installed alarm systems.</li> <li>• Knowledge of methods to explain alarm system functions to customer.</li> </ul>
<ul style="list-style-type: none"> <li>• Install alarm system according to applicable codes.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of pre-existing construction as it relates to alarm system installation.</li> <li>• Knowledge of alarm system design principles.</li> <li>• Knowledge of wiring methods (e.g., home run, series) related to alarm system installation.</li> <li>• Knowledge of types of wire used in alarm system installation.</li> <li>• Knowledge of electrical codes that apply to alarm system installation.</li> </ul>
<ul style="list-style-type: none"> <li>• Use safety procedures while operating equipment and using tools during alarm system installation to protect personnel.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of equipment and tools required for installation of alarm protection devices.</li> <li>• Knowledge of the use of hand and power tools in alarm system installations.</li> <li>• Knowledge of the use of protective and safety equipment during alarm system installation.</li> </ul>
<ul style="list-style-type: none"> <li>• Select installation method (e.g., hardwire, wireless) according to floor plan and alarm system design to meet protection requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of pre-existing construction as it relates to alarm system installation.</li> <li>• Knowledge of alarm system design principles.</li> <li>• Knowledge of procedures for conduit/raceway installation in alarm systems.</li> <li>• Knowledge of conduit types related to alarm systems.</li> <li>• Knowledge of wiring methods (e.g., home run, series) related to alarm system installation.</li> <li>• Knowledge of types of wire used in alarm system installation.</li> <li>• Knowledge of methods to ground alarm system equipment.</li> </ul>
<ul style="list-style-type: none"> <li>• Install arm/disarm devices (e.g., keypad) in location(s) according to customer needs, alarm company personnel recommendations, and manufacturer’s specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of installation procedures for alarm system keypad.</li> <li>• Knowledge of pre-existing construction as it relates to alarm system installation.</li> <li>• Knowledge of alarm system design principles.</li> <li>• Knowledge of wiring methods (e.g., home run, series) related to alarm system installation.</li> </ul>

**II. Installation (30%)** – This area assesses the candidate’s ability to install alarm systems according to codes and manufacturer’s specifications and educate customer about alarm system functioning.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>Install interior/perimeter detection devices (e.g., motion detector) in location(s) according to customer needs, alarm company personnel recommendations, and manufacturer’s specifications.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of pre-existing construction as it relates to alarm system installation.</li> <li>Knowledge of installation procedures of alarm system interior detection devices.</li> <li>Knowledge of installation procedures of alarm system perimeter detection devices.</li> <li>Knowledge of equipment and tools required for installation of alarm protection devices.</li> <li>Knowledge of alarm system design principles.</li> </ul>
<ul style="list-style-type: none"> <li>Connect alarm system communication transmission device to remote monitoring facility to monitor alarm system activity.</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of installation procedures for alarm system control panel unit (CPU).</li> <li>Knowledge of methods to connect communication transmission device with remote monitoring facility.</li> <li>Knowledge of methods to install phone line interface devices.</li> <li>Knowledge of effects of high speed internet connection on alarm system communication transmission.</li> <li>Knowledge of methods to install high speed internet filters.</li> </ul>
<ul style="list-style-type: none"> <li>Install control panel in location designated by customer needs, alarm company personnel recommendations, and manufacturer’s specifications</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of installation procedures for alarm system control panel unit (CPU).</li> <li>Knowledge of pre-existing construction as it relates to alarm system installation</li> <li>Knowledge of alarm system design principles.</li> <li>Knowledge of wiring methods (e.g., home run, series) related to alarm system installation.</li> <li>Knowledge of methods to ground alarm system equipment.</li> <li>Knowledge of electrical codes that apply to alarm system installation.</li> <li>Knowledge of methods to connect communication transmission device with remote monitoring facility.</li> <li>Knowledge of methods to install phone line interface devices.</li> <li>Knowledge of the operation of installed alarm systems.</li> </ul>

**III. Service and Repair (14%)** – This area assesses the candidate’s ability to investigate reported alarm system problems, repair or service alarm systems, and verify that the repaired alarm system is operational.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Test for operation of repaired alarm system to confirm system is in working condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of basic trouble-shooting procedures.</li> <li>• Knowledge of techniques to test alarm system functioning.</li> </ul>
<ul style="list-style-type: none"> <li>• Investigate reported alarm system problem(s) to identify equipment or devices that are defective to determine course of action.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of techniques to test alarm system functioning.</li> <li>• Knowledge of relationship between problem symptom and problem cause.</li> <li>• Knowledge of methods used to interpret central monitoring facility reports.</li> <li>• Knowledge of methods used to analyze service history.</li> <li>• Knowledge of methods used to recognize problems with alarm system equipment.</li> </ul>
<ul style="list-style-type: none"> <li>• Assess alarm system problem history to identify problem area.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of basic trouble-shooting procedures.</li> <li>• Knowledge of methods used to interpret central monitoring facility reports.</li> <li>• Knowledge of methods used to analyze service history.</li> </ul>
<ul style="list-style-type: none"> <li>• Repair alarm system to restore to original operating condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of basic trouble-shooting procedures.</li> <li>• Knowledge of relationship between problem symptom and problem cause.</li> <li>• Knowledge of methods used to recognize problems with alarm system equipment.</li> <li>• Knowledge of methods to repair alarm systems according to manufacturer specifications.</li> <li>• Knowledge of compatibility of alarm system components for repair service.</li> </ul>

**IV. Management (14%)** – This area assesses the candidate’s ability to comply with laws about contracts, personnel, training, record keeping, firearms, and nonlethal weapons.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Develop standard contract for customers in regards to the installation and monitoring of alarm systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of legal obligations regarding alarm system equipment and installation.</li> <li>• Knowledge of legal requirements for contracts related to alarm system installation.</li> </ul>
<ul style="list-style-type: none"> <li>• Verify that alarm company personnel are in compliance with Bureau guidelines regarding registration requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of steps used during screening process for hiring alarm system personnel.</li> <li>• Knowledge of fingerprinting requirements of alarm company personnel as mandated by the Alarm Company Act (BSIS).</li> <li>• Knowledge of laws regarding powers of arrest training for alarm company personnel.</li> <li>• Knowledge of laws regarding nonlethal weapons training for alarm company personnel.</li> <li>• Knowledge of laws regarding firearms training for alarm company personnel.</li> <li>• Knowledge of registration and renewal requirements related to alarm company personnel.</li> </ul>
<ul style="list-style-type: none"> <li>• Verify that alarm company personnel maintain their registration with the Bureau to meet legal obligations.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of laws regarding powers of arrest training for alarm company personnel.</li> <li>• Knowledge of laws regarding nonlethal weapons training for alarm company personnel.</li> <li>• Knowledge of laws regarding firearms training for alarm company personnel.</li> <li>• Knowledge of registration and renewal requirements related to alarm company personnel.</li> </ul>
<ul style="list-style-type: none"> <li>• Train alarm company personnel by following Bureau guidelines to meet legal obligations.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of laws regarding powers of arrest training for alarm company personnel.</li> <li>• Knowledge of laws regarding nonlethal weapons training for alarm company personnel.</li> <li>• Knowledge of laws regarding firearms training for alarm company personnel.</li> </ul>

**IV. Management (14%)** – This area assesses the candidate’s ability to comply with laws about contracts, personnel, training, record keeping, firearms, and nonlethal weapons.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Maintain records of firearms possessed by and under the personal control of alarm company personnel according to legal guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of laws related to record keeping of firearms.</li> <li>• Knowledge of laws regarding the use of a firearm as an alarm company operator.</li> </ul>
<ul style="list-style-type: none"> <li>• Submit deadly weapon report of incidence(s) as required by law to the Bureau.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of laws related to record keeping of firearms.</li> <li>• Knowledge of laws requiring the submission of deadly weapons report following the discharge of a firearm.</li> <li>• Knowledge of laws regarding the use of a firearm as an alarm company operator.</li> </ul>

V. **Monitoring (11%)** – This area assesses the candidate’s ability to set up and maintain alarm system monitoring accounts in accordance with Bureau guidelines.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Verify that signal data corresponds with points of protection recorded by monitoring station.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of system programming regarding types of signals (e.g., contact ID, SIA, 4-2 format) transmitted by alarm systems.</li> <li>• Knowledge of communication methods (e.g., digital, radio) used to transmit alarm system activity.</li> <li>• Knowledge of methods used to verify that points of protection, panel programming, and monitoring station data base correspond.</li> </ul>
<ul style="list-style-type: none"> <li>• Test alarm system signals through monitoring station to verify signal transmission.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of system programming regarding types of signals (e.g., contact ID, SIA, 4-2 format) transmitted by alarm systems.</li> <li>• Knowledge of communication methods (e.g., digital, radio) used to transmit alarm system activity.</li> <li>• Knowledge of methods used to verify recorded signal data.</li> </ul>
<ul style="list-style-type: none"> <li>• Provide monitoring services to alarm system customer in accordance with Bureau guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of laws related to the use of third party monitoring services by alarm company operators.</li> <li>• Knowledge of laws regarding alarm company monitoring services.</li> <li>• Knowledge of monitoring agreement criteria between alarm company operator and monitoring service provider.</li> </ul>



**VI. False Alarms (16%)** – This area assesses the candidate’s ability to prevent, identify, and rectify false alarms as well as to educate the customer about false alarm prevention.

<i>Job Tasks</i>	<i>Associated Knowledge Statements</i>
<ul style="list-style-type: none"> <li>• Verify alarm system has been programmed correctly to prevent false alarms.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of causes of false alarms.</li> <li>• Knowledge of alarm system equipment application related to false alarm prevention.</li> <li>• Knowledge of programming options for alarm systems related to false alarm prevention.</li> </ul>
<ul style="list-style-type: none"> <li>• Install alarm system according to manufacturer’s specifications to prevent false alarms.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of causes of false alarms.</li> <li>• Knowledge of alarm system equipment application related to false alarm prevention.</li> <li>• Knowledge of programming options for alarm systems related to false alarm prevention.</li> </ul>
<ul style="list-style-type: none"> <li>• Educate customer(s)/user(s) on false alarm prevention procedures to minimize false alarms occurrences.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of customer/user(s) responsibility regarding false alarm prevention.</li> <li>• Knowledge of causes of false alarms.</li> <li>• Knowledge of strategies to obtain information about local ordinances (e.g., fines, nonresponse) related to false alarms.</li> <li>• Knowledge of alarm system equipment application related to false alarm prevention.</li> <li>• Knowledge of programming options for alarm systems related to false alarm prevention.</li> <li>• Knowledge of alarm industry standards related to alarm verification prior to dispatch.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify source of false alarm activity to determine corrective action.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of customer/user(s) responsibility regarding false alarm prevention.</li> <li>• Knowledge of causes of false alarms.</li> <li>• Knowledge of alarm system equipment application related to false alarm prevention.</li> <li>• Knowledge of methods used to determine source (e.g., user, equipment) of false alarm activity.</li> </ul>