# Integration Note

| | |
|---|---|
| Manufacturer: | ELK |
| **Model Number(s):** | **M1 Gold, M1EZ8** |
| **Core Module Versions:** | 4.0 (Build 275 and later) |
| Comments: | Panel Firmware: 4.3.8 or 5.2.4 Main, 3.1.13 Boot<br>ELKRP: Version 1.6.2 |
| Document Revision Date: | 1/31/2013 |

## OVERVIEW AND SUPPORTED FEATURES

The **ELK** panels integrate with the **g!** system using an RS-232 serial connection. The M1 Gold includes an RS-232 port, whereas the M1EZ8 requires the ELK-M1EZ8MSI Main Serial Port Interface.

Integration of the security system provides monitoring and control from any touch screen, telephone or computer both locally and remotely. Additionally, events occurring in the security system can trigger system commands in other sub-systems in the home. For example, a burglar alarm can turn all the lights on and send out email alerts. The security system can also receive commands as a result of events within other sub-systems. For example, changing the house mode from Home to Vacation can trigger a security command to arm the system.

**IMPORTANT NOTE – LIGHTING AND THERMOSTATS:**

Although the ELK panels can integrate thermostats and lighting systems, only the security functions of the ELK panel are accessible by the **g!** system: any climate or lighting systems must be tied to the **g!** system and NOT the ELK.

### THESE PANELS SUPPORT THE FOLLOWING FEATURES:

**Arm – Disarm:** Arm and disarm from the Viewer interface is supported. Status information is available for all partitions.

**IMPORTANT NOTE:**

If using Firmware 5.2.4 you may need to uncheck the box labeled "Access" in the ELK RP Software for Arming and Disarming to function properly.

**Auto Arm:** Arming as a System Command from the Event Mapper is supported. By default, automatic arming is disabled in the Configurator.

**Zone Status:** Zone status information is available for all zones (in any partition), and is properly shown in the Viewer.

**History View:** The history view is properly supported on any Viewer.

**Auto Zone and Partition Detection**: The **g!** system will automatically detect the zone name and number as well as partition name and number.

### THESE PANELS DO NOT SUPPORT THE FOLLOWING FEATURES:

**Thermostats:** Thermostats connected behind the panel cannot be controlled from the **g!** system.

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**Lighting:** Lighting systems connected behind the panel cannot be controlled from the **g!** system.

| Any feature not specifically noted as supported should be assumed to be unsupported. |
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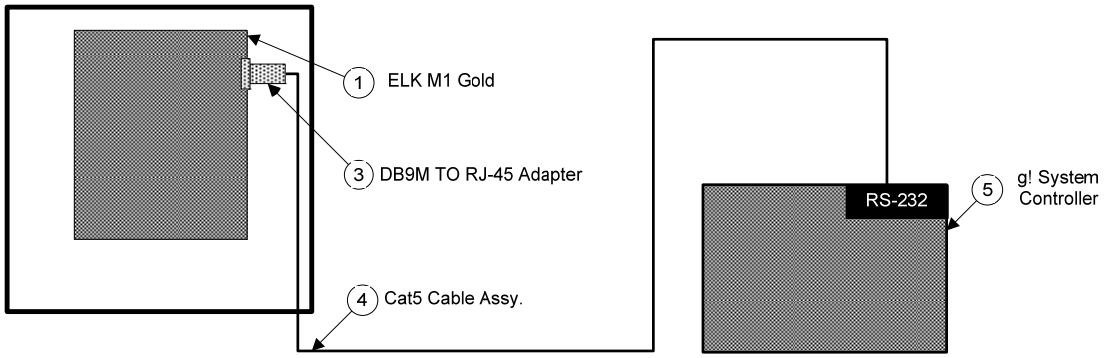
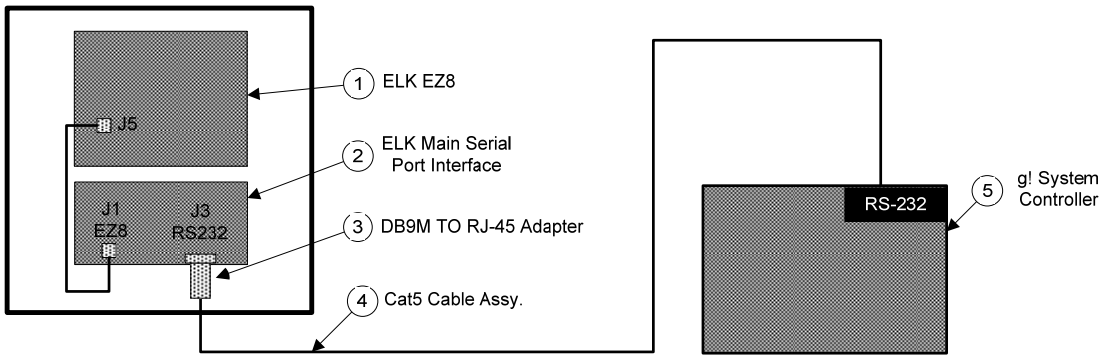
## INSTALLATION OVERVIEW

1. Install the security system.
2. If you are using the ELK EZ8, then you must also install the ELK-M1EZ8MSI Main Serial Interface.
3. Run a Cat5 wire from the **g!** system to the security panel and test the cable.
4. Test the security panel, zone sensors and keypads for functionality.
5. Connect the **g!** system to the panel electrically.
6. Configure the **g!** system controller communication device and security panel and confirm communication between the panel and the **g!** system controller.
7. Test the arming and disarming capability from a computer or touch screen and confirm history function.

## CONNECTION DIAGRAMS




### BILL OF MATERIALS

| # | Device | Manufacturer | Part Number | Protocol | Connector Type | Notes |
|---|---|---|---|---|---|---|
| 1 | Control Panel | ELK | M1Gold or EZ8 | Various | RJ45 (EZ8) or DB-9 Female (M1Gold) | |
| 2 | Serial Port Interface | ELK | ELK-M1EZ8MSI | RS-232 | DB-9 Female | ONLY REQUIRED for EZ8 |
| 3 | DB9M to RJ45 Adapter | ELAn | HA-CB-307 | RS-232 | DB-9 Male X RJ-45 Female | |
| 4 | Cat5 Cable | Installer | N/A | RS-232 | RJ-45 Male X RJ-45 Male | Must terminate all 8 conductors |
| 5 | g! System Controller | ELAN | Various (e.g. HC12) | RS-232 | RJ-45 | |

## PANEL PROGRAMING

Use the ElkRP software tool to configure the panel with the settings for each zone, partition and so forth.

### PANEL VERSIONS

Before programming the panel, we suggest checking the firmware. The version shown at the top of this Integration Note has been tested, and we suggest using this version or a newer version. If you have older versions we suggest you update to at least the versions shown at top.

### SYSTEM PROGRAMMING

Once the firmware has been checked, setup the system according to normal ELK procedures. When you have completed programming, test the entire system as a stand-alone entity.

### SYSTEM PROGRAMMING

Once the ELK panel is working properly as a stand-alone system, use the ElkRP software to setup the panel for **g!** integration as follows:

1. Start the ELKRP software and open the account for this job.
2. Select **Globals** in the Folder items at left.
3. Select the **G29-G42 (Special)** tab.
4. For **Serial Port 0 baud rate** (at the right), select **9600**.
5. Check **Transmit event log**.
6. Check **Transmit zone changes**.
7. Check **Transmit keypad keys**.
8. Save your settings on your hard drive.
9. Save the settings to the panel.

## g! CONFIGURATION DETAILS

The following table provides settings used in the **g!** Configurator. Please refer to the Configurator Reference Guide for more details.

- o "<Select>" Select the appropriate item from the list (or drop-down) in the Configurator.
- o "<User Defined>", etc. Type in the desired name for the item.
- o "<Auto Detect>", etc. The system will auto detect this variable.

| Devices | Variable Name | Setting | Comments |
|---|---|---|---|
| | | | |
| **Communication Devices** | **Name** | <User Defined> (Default: **Security**) | |
| | **Type** | **Serial Port** | |
| | **System Controller Name** | N/A | |
| | **Communication Type** | **Standard Connection** | |
| | **Location** | <User Defined> (Not Required) | |
| | **Com Port** | <Select> | |
| | | | |
| | | | |
| **Security Panels** | **Name** | <User Defined> (Default: **ELK-M1**) | |
| | **Device Type** | **ELK-M1** | |
| | **Location** | <User Defined> (Not Required) | |
| | **Comm Device** | <Select> (Default: **Secuirty**) | |
| | | | |
| **PIN** | **Set Button** | <User Defined> | Click the **Set** button, then enter a valid PIN |
| | | | |
| **<Discover Devices>** | Click the **Discover Devices** button on the Communication Device | | |
| | | | |
| | | **Name Show Auto Keys** | |
| | **Disarm** | **Disarm Yes NO Code + Enter** | See Note 1. |
| | **Mode 1** | **Away Yes NO Code + Enter** | |
| | **Mode 2** | **Stay Yes NO Code + Enter** | |
| | **Mode 3** | **Stay Inst. Yes NO Code + Enter** | |
| | **Mode 4** | **Night Yes NO Code + Enter** | |
| | **Mode 5** | **Night Inst. Yes NO Code + Enter** | |
| | **Mode 6** | **Vacation Yes NO Code + Enter** | |
| | | | |
| | | | |
| **Partions** | **Name** | <Auto Detect> | |
| | **Show Partition** | **Yes** | |
| | **Areas in Partition** | <User Defined> (Not Required) | |
| | | | |
| | | | |
| **Zones** | **Name** | <Auto Detect> | |
| | **Enable Bypass** | <Select> (Default: **Yes**) (See Note 2) | |
| | **Exists in Partition** | <Select> (See Note 3) | |

**Notes:**

1. To avoid having to press Enter, setup all the PINs in the system with the same number of digits (4, 5 or 6), then select **4 (5, or 6) Keys**.
2. The Enable Bypass is set to Yes by default: change this to No for any zones you do not wish bypassed from the Viewer interface.
3. For each zone, add the partitions in which that zone is a part.

## COMMON MISTAKES

1. Failing to test the Cat5 cable assembly. It is easy to make a mistake when terminating the Cat5 cable with the RJ-45 connectors. Always use a LAN tester to check for continuity and shorts.
2. Using a Cat5 patch cable without all 8 conductors. Some Ethernet patch cables only have the 4 conductors (1,2,3,6) needed for Ethernet communications. These cables will not work as patch cables for RS-232 communications. Visually inspect the clear plastic connectors to determine if all 8 wires are present.
3. Using a null modem to connect the RS-232 port. The ELK panel connection does not require a null modem when connecting to a **g!** system controller.
4. Failing to plug the Cat5 cable assembly into the correct port. Make sure the RJ-45 connector is plugged into the same port (COM1, 2, 3 or 4) that is specified in the Configurator.