

LTC 8950 Series



Security Systems

EN | User Manual
System Supervisor
Version 2.8

BOSCH

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1 SYSTEM SUPERVISOR

1.1 Overview

The System Supervisor monitors and controls operation of the LTC 8900 System. When an LTC 8900 configuration file is opened from the Allegiant® Master Control Software program, and put *Online*, the System Supervisor becomes visible. Status of the LTC 8900 System components is graphically displayed in the Supervisor's Status Display Window, and operation of the System can be controlled via the mouse or PC keyboard. If the *Auto-Select* operation mode is selected, failure of the *In-Use* CPU or the Network LAN connected to it causes an automatic changeover to the *Stand-By* CPU. If the *Data Mirroring* function has been operating prior to an *In-Use* CPU failure, the *Stand-By* CPU contains all of the latest System settings, and operation of the System continues with minimal disruption. System mode changes and malfunctions that occur are logged, and can be reviewed in a scrollable *Event Log* Window.

2 TERMINOLOGY

Some terminology used in the LTC 8900 System, and on the System Supervisor displays:

- **In-Use** indicates the device (CPU or Network LAN) is currently being used to operate the System.
- **Stand-By** indicates the CPU is fully operational, and available if the *In-Use* CPU or the Network LAN connected to it malfunctions.
- **Primary Mode** is the mode of operation selected when the slide switch on the LTC 8901 CPU Bay front panel is in the *Primary* CPU position. This selects the *Primary* CPU to always be *In-Use*, even in the event of failure or malfunction.
- **Back-Up Mode** is the mode of operation selected when the slide switch on the LTC 8901 CPU Bay front panel is in the *Back-Up* CPU position. This selects the *Back-Up* CPU to always be *In-Use*, even in the event of failure or malfunction.
- **Auto-Select Mode** is the mode of operation selected when the slide switch on the LTC 8901 CPU Bay front panel is in the *Auto* position. This allows the System Supervisor to automatically switch the *In-Use* and *Stand-By* CPU to restore operation of the system in the event of failure of the *In-Use* CPU or the Network LAN connected to it.
- **Primary** (CPU and Network) is the CPU and Network LAN pair activated when the slide switch on the LTC 8901 CPU Bay front panel is in the *Primary* CPU position (also can be activated when the LTC 8900 is in *Auto-Select* mode).
- **Back-Up** (CPU and Network) is the CPU and Network LAN pair activated when the slide switch on the LTC 8901 CPU Bay front panel is in the *Back-Up* CPU position (also can be activated when the LTC 8900 is in *Auto-Select* mode).
- **Data Mirroring** is a technique allowing two CPUs to receive the same data, and the same updates, so they can be interchanged in the event of malfunction, with no loss of data or operator intervention.
- **Network LAN** is a term used in the manual and the software, to denote the operating conditions of either LAN *Hubs* or LAN *Switch* network devices supplied with the LTC 8900 system.

3 SYSTEM SUPERVISOR CONTROLS AND DISPLAYS

3.1 System Menu

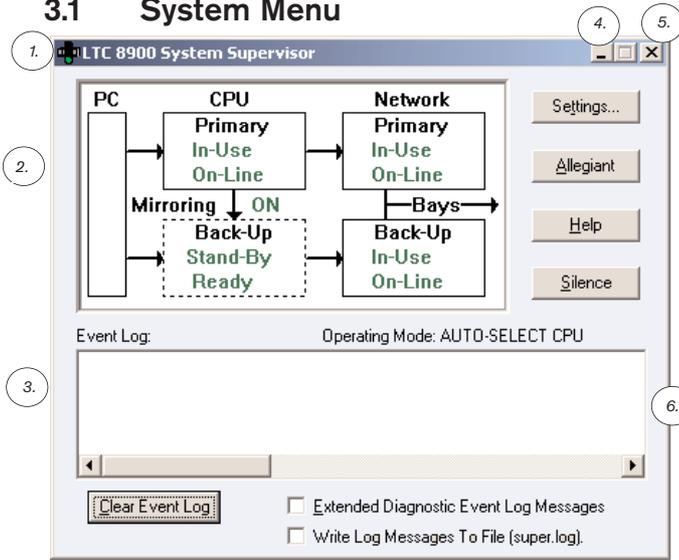


Figure 1 System Supervisor Main Screen

1. System Menu
2. Status Display
3. Event Log
4. Minimize
5. Shut Down
6. Mode Display

Click **System Menu** to display a menu with selections used to minimize, move, or close (Shut Down) the System Supervisor, and to view the *About* box of the System Supervisor (contains copyright and version number information).

3.2 Minimize

Click the [-] icon at the top right-hand corner to minimize the System Supervisor, if desired. If an event occurs causing a *Caution* or *Failure* indication on the Supervisor Status Display, the Supervisor automatically returns to its original size. When minimized, the color on the *traffic signal*, drawn on the icon, reflects the state of the System.

3.3 Shut Down

Click the [x] icon at the top right-hand corner to shut down the System Supervisor and end monitored operation of the LTC 8900. The LTC 8900 Configuration file may also be closed, based on the state of the Allegiant Master Control Software application. See LTC 8900 Operation-Shut Down for more information.

3.4 Status Display

The Status Display graphically indicates the current status of the *Primary* and *Back-Up* CPU Controllers and Network LANs.

Colors and dashed lines help indicate the status of the items in the display.

Color/Indicator	Description
Green	The item is functioning normally.
Yellow and Flashing	An item is changing state, or questionable.
Red, Flashing, and Beeping	Failure of an item.
Solid Lines	CPU or Network LAN is <i>In-Use</i> .
Dashed Lines	CPU or Network LAN is NOT <i>In-Use</i> .
Battery	A low or dead battery has been detected in the indicated CPU
Data Mirroring States	
	Mirroring is ON (from <i>In-Use</i> to <i>Stand-By</i> CPU).
	Mirroring is OFF, but possible (from <i>In-Use</i> to <i>Stand-By</i> CPU).
	Mirroring is OFF and is NOT possible because both CPU's are not fully operational.

Figure 2 Status Display

3.5 Settings Button

When **Settings** is clicked, the System Setting dialog box is displayed. Use the System Settings dialog box (shown below) to select the CPU to be used when the System is operated in the *Auto-Select* Mode (via the front panel slide switch on the LTC 8901 CPU Bay), and to enable *Data Mirroring*. The System Settings dialog box is also displayed when the operator initially moves the front panel slide switch on the LTC 8901 to the *Auto (Auto-Select)* position.

The System Supervisor Settings dialog box is shown below, followed by descriptions of the controls and displays. Any selections made while in this dialog box are only applied when/if **OK** is clicked.

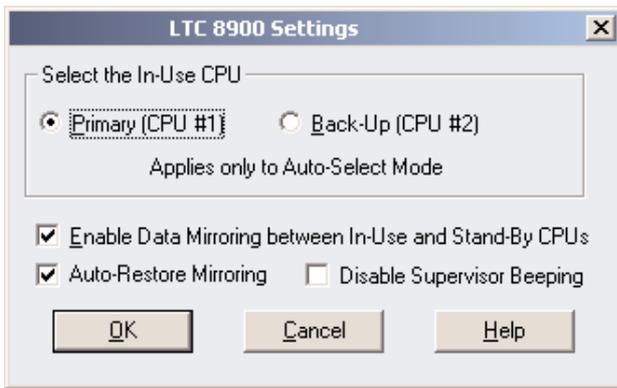


Figure 3 LTC 8900 Settings

- **Selection of the In-Use CPU:** The current *In-Use* CPU (if any) is displayed; the user can accept or change it by clicking on one of the selections. This selection applies only when the System is in the *Auto-Select* Mode of operation.
- **Enable Data Mirroring:** This selection is available only when both *Primary* and *Back-Up* CPUs are fully operational. When Data Mirroring is selected, all downloads and updates made to the *In-Use* CPU will be *Mirrored* (copied) to the *Stand-By* CPU. Mirroring will be disabled whenever the *Primary*, *Back-Up* or *Auto-Select* mode of operation is selected via the front panel slide switch on the LTC 8901 CPU Bay, or whenever a failure in *Auto-Select* Mode occurs. To re-enable it (if desired), use the System Settings dialog box.

Mirroring Notes:

- The Mirroring selection is not persistent (not saved when the application is closed).
- Mirroring defaults to off (on App start up).
- Mirroring can be enabled in Manual or Auto mode (Automatic CPU selection mode).
- Mirroring is turned off when switching to manual mode.
- When switching to Auto mode, settings dialog will come up to allow user to select mirroring mode.
- **Auto-Restore Mirroring:** By default, whenever the system switches over from an In-Use CPU to the Backup CPU, the Mirroring function will stop. By selecting this option, the software will periodically attempt to restore the Mirroring operation. Of course, restoration of the

Mirroring function will only be successful if the problem associated with the original CPU has been corrected.

Auto-Restore Mirroring Notes:

- The Auto-Restore selection is not persistent (not saved when the application is closed).
- Auto-Restore defaults to ON.
- Auto-Restore can be enabled in Manual or Auto mode.
- Auto-Restore is NOT disabled when switching between Auto and Manual.
- If Mirroring is enabled, and Auto-Restore Mirroring is enabled, and if both CPU's are online, and mirroring is not being done:
 - Auto-restores waits 1 minute, then tries to re-enable mirroring.
 - If the '1 minute' attempt fails, Auto-Restore will wait 15 minutes before attempting to Auto-Restore mirroring again (continues indefinitely).
- **Disable Supervisor Beeping:** If this box is checked, the Supervisor program will not activate the PC beeping feature when a system fault occurs. Visual indications and logging of the fault will operate normally.

Supervisor Beeping Notes:

- Disable Supervisor Beeping is not persistent (not saved when the application is closed).
- Disable Supervisor Beeping defaults to OFF (beeping NOT disabled).
- Beeping from other applications or from the OS on the PC are not affected.



CAUTION: Only enable *Data Mirroring* when you want to copy and update the data from the *In-Use* CPU into the *Stand-By* CPU. If data in the *In-Use* CPU is questionable, you may not want to copy it to the *Stand-By* CPU.

- **Help Button:** Displays Help Information about the System Settings dialog box. The [F1] key on the PC can also be used to invoke the Help System.

- **Cancel Button:** Discards any changes made and closes the System Settings dialog box.
- **OK Button:** Accepts any changes made and closes the System Settings dialog box. If any settings are inappropriate based on the current System State, warning messages will be provided, so the user can confirm or change the settings.

3.6 Allegiant Button

When **Allegiant** is clicked, the Allegiant Master Control Software application becomes visible and active, so that changes can be made to the System Configurations, and to upload, download, etc.

3.7 Help Button

Clicking **Help** displays information about the System Supervisor. The [F1] key on the PC can also be used to invoke the Help System.

3.8 Silence Button

Use the **Silence** button to stop any flashing or beeping. New events that cause flashing or beeping will restart those indications.

NOTE: The **Silence** button only affects the beeper on the PC; the LTC 8901 CPU Bay *Fault Alarm* beeper is not affected (see the LTC 8901 instructions for silencing the *Fault Alarm* beeper using a jumper wire or switch connected to the rear panel alarm connector).

If the option in the system settings dialog box is selected, no beeping will occur, but the flashing indications will still activate.

3.9 Operating Mode Display

The Operating Mode Display selected by the front panel slide switch on the LTC 8901 CPU Bay:

- **Manual - Primary CPU Mode**
The *Primary* CPU will always be used, even in the event of failure or malfunction.
- **Manual - Back-Up CPU Mode**
The *Back-Up* CPU will always be used, even in the event of failure or malfunction.
- **Auto-Select CPU Mode**
The user initially selects the CPU to be used (via the System Settings dialog box), and in the event of failure, the System Supervisor switches to the other CPU to restore System operation.

3.10 Event Log

The Event Log keeps a time and date stamped record of the last several hundred events that occurred during operation of the System Supervisor. Mode changes, failures and failure recovery actions are logged in a scrollable list. The Event Log consists of a scrollable list of events with the latest event at the top.

The **Clear Event Log** Button allows the list to be emptied, for ease of viewing new events (if not emptied the list discards the oldest events as it fills up).

The Extended Diagnostic Log Event message option will show more detailed information about changes made to the System. Generally, this information should be left off, unless troubleshooting a System problem.

Selecting the option to Write Log Messages To File will initiate the recording of all event details into a log file named Super.log on the hard drive.

As more and more events are recorded, the log file will grow to a maximum size of approximately eight (8) Megabytes. At that point, the oldest event details will be discarded as more new event details are received.

4 LTC 8900 SYSTEM OPERATION

4.1 Select Primary, Back-Up or Auto (Auto-Select) Mode Selection

Place the front panel slide switch on the LTC 8901 CPU Bay in the desired operating mode (*Primary* CPU, *Back-Up* CPU, or *Auto (Auto-Select)* mode). In the *Primary* or *Back-Up* modes, the System operates in a *Manual* mode. In the *Manual* mode, the selected CPU will always be used, even in the event of failure or malfunction. In *Auto (Auto-Select)* mode, the System Supervisor will switch to the *Stand-By* CPU in the event of failure or malfunction. The front panel slide switch on the LTC 8901 CPU Bay can be moved at any time to change the operating mode of the System.

4.2 Open the LTC 8900 Configuration file in the Allegiant Master Control Software Application

Open the Allegiant Master Control Software application, create or open an LTC 8900 configuration file, and select **Go-Online**. (See the Bosch Security Systems LTC 8059/00 Master Control Software User Manual for more detailed instructions.) When the *Online* command is completed (about 20 seconds), the System Supervisor will

become visible (only on the dedicated PC, and when running the below required configuration).

Some guidelines for creating an LTC 8900 configuration files for the Allegiant Master Control Software Application are described below.

For the System Supervisor to operate:

- The Allegiant Master Control Software Application must be running on the LTC 8900's dedicated PC.
- The LTC 8900 configuration file must specify (using the *Transfer/Communication Setup* dialog box): Current Host as *Local*, *Comm Port 3* for the *Primary* CPU, *Comm Port 4* for the *Back-Up* CPU, *115200* Baud (or *57600* Baud for older model CPUs), *8* data bits, *1* stop bit, *no parity*, and *handshaking ON*, for *Comm Port 3* and *Comm Port 4*.

To operate as a Networked Client of an LTC 8900 Host already running per the System Supervisor per the above:

- The client's LTC 8900 configuration file must specify (using the *Transfer/Communication Setup* dialog box): Current Host set to the network address of the Host PC, *Comm Port 3* for the *Primary* CPU, *Comm Port 4* for the *Back-Up* CPU, *115200* Baud (or *57600* Baud for older model CPUs), *8* data bits, *1* stop bit, *no parity*, and *handshaking ON*, for *Comm Port 3* and *Comm Port 4*.

To operate the LTC 8900 using the dedicated PC, but without the System Supervisor, or with a single CPU:

- The client's LTC 8900 configuration file must specify (using the *Transfer/Communication Setup* dialog box): Current Host set to *local*, *Comm Port 3* for the *Primary* CPU, *None* for the *Back-Up* CPU, and *115200* Baud (or *57600* Baud for older model CPUs), *8* data bits, *1* stop bit, *no parity*, and *handshaking ON*, for *Comm Port 3*.

To operate the LTC 8900 without using the dedicated PC, through the console port on the rear of the LTC 8901:

- The client's LTC 8900 configuration file must specify (using the *Transfer/Communication Setup* dialog box): Current Host set to *local*, specify any available *Comm Port* for the *Primary* CPU, *None* for the *Back-Up* CPU, and *115200* Baud

(or *57600* Baud for older model CPUs), *8* data bits, *1* stop bit, *no parity*, and *handshaking*, on the Comm Port used. Note, these communication settings must also be made in the Allegiant Configuration tables using the *PARAMETER/COMM PORT/ CONSOLE* settings.

4.3 When System Supervisor Becomes Visible

When the System Supervisor starts up, a few failure messages may appear momentarily on the Status Screen and in the *Event Log*. These are due to the System initializing, and may be erased from the *Event Log* using the **Clear Event Log** button.

The System Supervisor will become visible and begin to operate in the mode selected by the front panel slide switch of the LTC 8901 CPU Bay. If *Auto-Select* mode has been chosen, the *System Settings* dialog box will appear, for selection of the initial *In-Use* Controller. The status of the system is constantly monitored and displayed, and the controls of the System Supervisor can be used to modify the operation of the System, and to shut down the System Supervisor. The front panel slide switch on the LTC 8901 CPU Bay can be moved at any time to change the operating mode of the System, or to abort a System action that is not succeeding.

4.4 In the Event of a CPU Controller or Network LAN Warning, Malfunction, or Failure

- If the Supervisor has been minimized, it will automatically return to its normal size.
- The affected System component will flash on the Status Display (stop via the **Silence** button).
- If not disabled in the System Setting dialog box, the PC will begin beeping during failures. It can be silenced via the **Silence** button.
- An event will appear in the *Event Log*.
- The *Fault LED* on the front panel of the LTC 8901 CPU Bay for the affected CPU/LAN pair flashes.
- The *Alarm* on the LTC 8901 will sound (silence via LTC 8901 rear panel connections).
- The *Fault Relay* on the LTC 8901 for the affected CPU/LAN pair will be activated.

- If in *Auto-Select* mode and the *In-Use* CPU or LAN failed, the *Stand-By* CPU/LAN pair is automatically selected.
- If in *Manual* mode, the user must correct the situation or change the operating mode.

Once the problem has been corrected, the System indications automatically return to normal. If in *Auto-Select* mode, the CPU/LAN pair in use will not switch back to the originally selected *In-Use* CPU. If desired, use the *System Settings* dialog box to reselect the *In-Use* CPU.

Below is a sample screen showing a failure of the *Primary* CPU while in *Auto-Select* mode, and the subsequent *Auto-Select* of the *Back-Up* CPU and Network LAN. The *Status Display* graphically indicates the failures, and the currently selected CPU and Network LAN. Failure and recovery actions are contained in the *Event Log*.

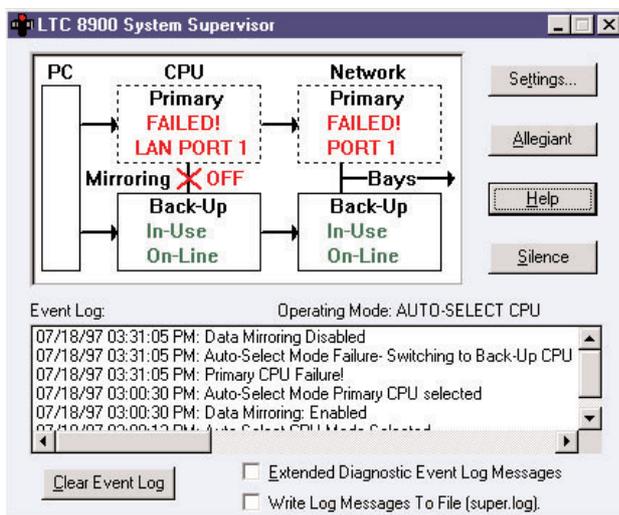


Figure 4 Error Message Display

4.5 To Shut Down the System Supervisor



CAUTION: When the System Supervisor is shut down, the LTC 8901 will no longer operate in the *Manual* or *Auto-Select* modes of operation, System monitoring will cease, and Data Mirroring between the CPUs will be disabled.

To shut down the System Supervisor, click the [x] icon, or select **Close** from the System Supervisor System Menu. After a confirmation dialog box, the System

Supervisor will shut down. If the Allegiant Master Control Software application is not visible, the LTC 8900 configuration file in the Allegiant will close, and the Allegiant application may close. If the Allegiant application is visible, the LTC 8900 file must be manually closed from the Allegiant application. If the LTC 8900 configuration file or Allegiant Master Control Software does not close, they may be in use by another user.

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